



Drivers, Challenges and Opportunities for Job Creation in the Sahel

Evert-jan Quak
Institute of Development Studies
15 October 2018

Question

What are the main drivers of job creation in the Sahel? What have the limitations been to date and what could drive improvements?

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1. Summary

This review synthesises the literature from academic, policy and institutions sources on the drivers of job creation in the Sahel countries Burkina Faso, Chad, Mali, Mauritania and Niger. The report first shows a baseline on employment in the five Sahel countries. Data from the World Bank shows that with the exception of Mauritania the countries are among the highest labour force participation rate in sub-Saharan Africa, while very low on employee's levels. For sub-Saharan standards, Mauritania has very high level of wage and salaried workers (51.2% in 2016), while around 10% for the other four countries. Unemployment rates are the highest in Mauritania (9.8% in 2016) and for the countries, unemployment is higher for youth and women (except from Niger where women unemployment is a little below the official unemployment rate), according to the World Bank data for 2016. Between 40% (Mauritania) and 50% (Niger) of the population is under 15 years. The population is expected to grow more than double in size in 2050, for example in Mali the expected net annual increase in the labour force is around 200 thousand workers in the next 20 years (IMF, 2015). Urbanisation rates in the Sahel countries are low in comparison with other countries in sub-Saharan Africa, in particular in Chad (23%) and Burkina Faso (32%). Mauritania again is different with the highest urbanisation level of 61%.

The Sahel countries are amongst the countries with the highest employment rates in the agriculture sector in sub-Saharan Africa (World Bank data for 2016). Chad has one of the highest level of employment in agriculture with 87% in 2016. Niger and Mauritania also belong to the countries with the highest employment rates in agriculture, both with 76%. In Mali employment in the agricultural sector is growing since 2004, while in Burkina Faso jobs in agriculture are vastly declining since 2006. For the other jobs, employment is dominated by the informal sector with all countries above 90% of workers in informal jobs (% of total non-agricultural employment). For example, in Burkina Faso with a total employment rate of 6.4 million people it was estimated that just 685,625 have formal jobs in 2015, of which 22.6% are government employees (IMF, 2018). In Niger 80% of the mining workforce works in the informal sector (US Department of State, 2013). In particular, in Mauritania the informal labour force has seen a widespread increase of migrant labour force.

A more detailed look at the economic sectors in the Sahel countries shows that the food economy and the non-food agricultural sector (mainly cotton) are the main providers for jobs. The share of **employment in the food economy** (on-farm and off-farm) compared to total employment are the highest for all West-African countries, with rates higher than 80% of total employment, with only Mauritania below the West-African average with 52%. With the exception of Mauritania, the share of food economy employment in the total rural employment for the Sahel is the highest for the West African region (with Mali, Niger and Burkina Faso all well above 90%). However, only Niger and Burkina Faso have the high share of food economy employment in the total urban employment (50% and 47% respectively) (Allen et al., 2018). 99% of employment in agriculture relates to food agriculture, however, farmers in Burkina Faso and Mali in particular rotate food crops with the non-food crop cotton, and as such are partly working in the food economy. Furthermore, those in agriculture work significantly fewer hours than those in downstream segments of the food economy (Allen et al., 2018).

Maize, millet, rice and sorghum are the main staple crops. Livestock are the most traded products between West African countries and the sector employs approximately 30% of total employment (in case of Mali). The rural population in Mali, living in settlements of less than 5,000 inhabitants and involved in livestock farming systems, is extremely significant: at 60% of the total

population. However, this share is expected to decrease down to 40% by 2050 due to the expansion of crop cultivation (Ly et al., 2010). Fishery is in some areas an important sector, but with the exception of Mauritania, mostly combined at household level with farming or livestock. In Mauritania, fisheries as an economic sector is important, accounting for 10% of GDP and 50% of export earnings.

Off-farm employment in food economy is far lower in the Sahel countries than in other West African countries, with the exception of Mauritania. In Mali and Niger the share is 9%, in Burkina Faso 13%, in Chad 15% and in Mauritania 24% (West Africa average is 22%) (Allen et al, 2018). Food marketing is the largest off-farm segment, while processing is smaller. The non-farm employment in food economy relates more to urban areas. With employment in food processing in Mali, Burkina Faso and Niger respectively 34%, 41% and 40% based in urban areas. Employment in the processing sector is dominated by women and tends to be unskilled and labour intensive. Food marketing is even stronger related to urban areas in these countries (46% in Mali and 57% in Burkina Faso) (Allen et al., 2018).

Non-food agriculture exists mainly of cotton (Mali, Burkina Faso and Chad) and some other niche products as shea nuts. According to the FAO 4 million Burkinabes (22% of the population) support themselves through activities connected to the cotton sector, however, mainly related to agriculture and less to processing. For Mali and Burkina Faso, 98% of the cotton is exported, the remaining 2% remains in the countries for processing into artisanal weaving yarns (unbleached, white, and dyed thread) and printed fabrics (bogolan fabrics, woven cloth, and woven koba). Although an important export product (the countries are the world's number six and seven exporters of cotton, mainly to Bangladesh garment industry), the sector counts for low value added to the economy (US GAIN, 2018). Low wages for hired labour on smallholdings also interact closely with risks associated with involuntary labour, and combined with high levels of child labour, have important implications for rural livelihoods. The cotton sector is increasing again, due to support programmes and higher market prices, after a decline in productivity in the 1990s and start of 2000s. In Chad, the cotton industry is still in decline.

The **extractive industry** is increasing rapidly in the region (Chad mainly oil, Mauritania mainly iron, Niger mainly Uranium, and Burkina Faso and Mali mainly gold). However, modern large-scale mining does not employ many workers. It has historically been capital-intensive, and this feature increased with technological progress. Thus, extractive industries, like oil and gas industry or mining industry, could be characterised of being cut off from the domestic economy except through royalties and taxes. For example, the mining industry officially employs 3,700 people in Mali, mainly in gold mining – an amount that over the years has not very much changed (Chuhan-Pole et al., 2017). For every one mining job created, 1.67 jobs are created elsewhere through backward linkages and expenditure effects (Sanoh & Coulibaly, 2015). In other words, the multiplier effects are limited, partly because of the capital intensity of the mining industry, but also because of the lack of local cost-effective procurement opportunities (Chuhan-Pole, 2017).

Manufacturing and construction are industries that are underdeveloped in the region. Manufacturing is mainly related to the agro-pastoral sector by processing food (crops, seed oils, fish and livestock) and non-food agricultural products (cotton and shea nuts). 50% of the employment in the secondary sector relates to the processing of food in Niger, 38% in Burkina Faso and 32% in Mali (Allen et al., 2018). The manufacturing in Niger counts only for 6% of GDP in 2016 and in Burkina Faso manufacturing accounted for 6.6% of GDP in 2015 and the share of manufactured goods in total export of goods was in 2014 10.4% (IMF, 2018b). In Chad the sector

counts for 3.2% of GDP in 2016. In particular, de-industrialisation could be witnessed in Mali, the numbers show that Mali's manufacturing sector has steadily contracted as a share of output as percentage of GDP (from 12% in 1995 to 7% in 2013) while it remained flat in most other countries in West Africa (IMF, 2015). On the other hand, the share of output of agriculture remained stable, while in other countries in the West African region its share had declined (IMF, 2015).

In the timespan of this research, no recent literature could be found on exact numbers of people working in **service sectors** (private or public sector workers). Only for Burkina Faso recent data shows that the government wage bill has increased rapidly since 2000, reflecting a large expansion in government employment, particularly in education and security (IMF, 2016).

The literature shows that the drivers of more formal and productive jobs in the Sahel could be:

- **Trade openness:** Manufactured exports measured per capita in the Sahel countries is far below the average for low-income countries. To increase manufacturing exports, the countries must open their trade and improve their trans-border infrastructure. Regional trade in particular provides possibilities to create jobs by reaching into markets with higher demand than in the small Sahel countries. Formal as informal traders show a great ability to invest in commercial networks and routes. Drawing upon kinship, ethnic and religious ties, their embedded business networks help to reduce business risks, pool complementary skills, improve access to new markets and safeguard property rights, which is important in an uncertain environment such as the Sahel (Walther, 2014). However, poor infrastructure, inefficient customs and other issues hamper trade flows within the region, despite the positive impact of proximity of countries. The costs of trade clearly seem to be a significant obstacle not only for integration or rather participating in global trade but also for integration within the ECOWAS region (Lange et al., 2016).
- **Industrial clusters linking up with inclusive value chains:** Production, manufacturing and service industries should cluster together, as clusters they generate more productivity gains and job creation, by attracting new industry into a sparse industrial landscape, like the Sahel countries. For the Sahel forward and backward linkages in manufacturing clusters are most promising related to the food economy and some non-food cash crops as cotton and shea nuts. Creating an industrial cluster that add more value, needs to be competitive in the international market and relies on public and private investment in infrastructure and capacity building. However, the literature mentions the complexity around the creation of industrial clusters within inclusive value chains, which should absorb workers from the agricultural sector and informal sector in cities. Until now, inclusive business models tend to be far from collaborating with informal economic systems and actors in search for mutual benefit.
- **Green economy:** Driver of non-traditional job creation in the Sahel countries is the green economy, mainly in renewable energy sources, in particular solar energy. Burkina Faso opened the biggest solar installation in West Africa in 2017 and Mali is investing in solar plants. No studies could be found for the Sahel of what this means for employment, but the direct employment generation could be very small, as the technology is imported and, in case of Burkina Faso, built by French companies. However, big solar installations are not the only way to deliver renewable energy to the population. A new industry of mini-solar systems for poor households can create

more direct jobs and more importantly, generates spill-overs to give communities more productive opportunities where they are not connected to the grid. From literature it shows that up to 15,000 new jobs have been created in the wider economy in sub-Saharan Africa as a result of the transition to efficient off-grid lighting (UNEP, 2014). The combination of more and better light, access to ICTs and awareness of solar technology increases opportunities of marketing new services and technologies to off-grid populations. Entrepreneurs enter the market with special applications for mobile phones, SMS-services and solar enabled technologies (e.g. solar PV irrigation pumps, solar PV cool storage, solar PV food dryers), with the potential to increase economic development and output (IRENA, 2016).

- **Linking entrepreneurship, innovation and skills to markets:** For better and formal job creation, the Sahel countries need higher capability firms and enterprises. Value-chain relationships between different firms need to be promoted and need specific skills for entrepreneurs and employees. Education as an important solution in keeping up with changing economic and technological developments, for productivity growth, and in closing the skills gap and allowing more people to find suitable jobs (Bhorat et al, 2016). Better entrepreneurship skills can increase productivity and upscaling of small enterprises, also with a better chance of growing out of informal sector. However, low skill attainment and literacy, currently stifle job growth in the Sahel countries. A study (USAID, 2017) identified key barriers to livelihoods diversification efforts: insufficient literacy, education, training, and access to credit, skills, and networks to productively engage in micro- or small enterprises outside of traditional farming and livestock activities. There is a need for increased training and support for aspiring entrepreneurs, including improving access to credit, apprenticeships, and information to expand opportunities.
- **Investments:** Public investment is critical to support the delivery of key public services and catalyse economic growth and poverty reduction. For instance, public investment in social infrastructure is essential to improve the access to education, to invest in skills gap, while investments in economic infrastructure (e.g., roads and electricity) should help expand integrate and expand economic sectors and favour the generation of private sector employment. However, beyond its level, the efficiency of public investment is crucial. Improvements in public investment management (PIM) are key to enhance the efficiency and productivity of public investment (IMF, 2018). In the Sahel countries public investment is on the rise, however, with low efficiency rates. Only in Chad public investments declined significantly in 2016 due to low revenues from the oil sector. Private sector investments are important, but the Sahel countries still are among the lowest in the World Bank Doing Business ranking, and the investments that enter the country should be linked with local value chains and efforts against price shifting to increase corporate tax income revenues, which the countries rely heavily on for public spending. For example, a World Bank report (2018) emphasises for Mauritania the need to establish a more effective public investment management system, prioritising projects that combine economic performance and social impact (World Bank, 2018).

As shown, these drivers will not generate jobs automatically. They need good governance, good (investment) management skills in public and private sector, and human security and conflict prevention to guarantee stability. The main challenges for the region to create jobs are the following (and are mainly the focus of donor interventions, see appendix):

- **Demography** – The demographic growth dividend remains negligible in the Sahel as fertility rates decline only modestly and the labour market currently unable to absorb the new workers in productive activities (IMF, 2016). With the limits to the manufacturing and service sectors to absorb new workers, any excess labour force will seek informal employment in urban areas or in subsistence agriculture.
- **Security:** Insecurity has increased in Mali, Burkina Faso, Niger and Chad. The region is prone to human insecurity, instability and faces a high level of refugees. The security relates to youth unemployment, food insecurity, high levels of smuggling (goods, arms, drugs and migrants to Europe).
- **Skills gap:** Opportunities for wage employment are limited and few people are employed in the formal sector, in part because of low skills that are not corresponding to the higher skill levels that are needed in the formal economy.

Fortunately, there are some opportunities:

- **Urbanisation:** Urbanisation and rising incomes are driving major transformations, in particular in the food economy. Although, the Sahel countries are among the least urbanised countries in the world, urbanisation is taking place gradually, shaping a gradual transformation of the food economy, with the opportunity to create jobs in urban and peri-urban areas related to food systems.
- **Remittances** - Remittances to Sahel countries have increased significantly and are expected to rise further. In literature, remittances are linked to economic activities in the countries, giving opportunities for productive investment for small businesses (Fransen et al., 2016). The data for the Sahel shows the regional link, with most remittances going to neighbouring countries, which is good for building social networks that could drive further regional openness and trade.
- **Advancements in food system thinking** - In the Sahel, promoting non-agricultural employment will depend on supporting private enterprises, in particular SMEs, to drive growth and job creation (Allen et al., 2018). Policies aimed at supporting value chain development, integrated skills development and systems as well as improving the overall business climate are important elements in the jobs agenda. In addition, off-farm activities and the food economy in general, play a particularly important role in women's employment. As the appendix shows, many of the donor interventions in the region relate to building food systems and value chains by creating new food markets and increasing skills and entrepreneurship.
- **Spending productively public revenues from extractive sector** – Another opportunity is to use the revenues from the extractive industry for investments in job creation. The Sahel saw a rapid increase in investments in the extractive industry and IMF and World Bank are among others funding projects and programmes to increase the efficiency of these investments with by creating more spill-overs.

2. Employment data and trends

World Bank data¹ shows that for 2016 the **labour force participation rate** (% of total population ages 15+) was the highest in Niger (78.9%), Mali (71.2%) and Chad (71.2%) and above the average for sub-Saharan Africa (68.2%). Burkina Faso has a rate of 66.7% and Mauritania is well below the average with 49.4%. Comparing the G5 Sahel countries, Mauritania has a high level of wage and salaried workers (51.2% of total employment). Chad (8.2%), Niger (10.6%), Mali (11%) and Burkina Faso (12%) all have very low **employees' levels**, all very much below the sub-Saharan African average of 26%. By using the 2016 data from the World Bank website, the G5 Sahel countries have a total employment ranging from 8.1 million in total employment in Niger, 6.4 million in Burkina Faso, 6.2 million in Mali and 5.1 million in Chad. Mauritania is by far the smallest with 1.1 million in total employment. The **GDP per person employed** in Mauritania is the highest with US\$13,388, this is higher than the average in sub-Saharan Africa (US\$9,517), while the other four G5 Sahel countries are amongst the lowest levels of GDP per person employed in sub-Saharan Africa: US\$2,317 in Niger, US\$4,685 in Burkina Faso, US\$5,220 in Chad and US\$5,854 in Mali.

The data from the World Bank also shows that **unemployment rates** in the G5 Sahel are not amongst the highest in sub-Saharan Africa, in particular in comparison with countries like South Africa, Mozambique, Namibia, Botswana, which all exceeded 15% unemployment rates in 2016. Niger has the lowest official unemployment rates, with 0.3% of the labour force counted as unemployed. The country's rate declined from approximately 5% in the 1990s to 3.1% in 2007. Chad has a total unemployment rate as percentage of labour force of 5.8%, which has been stable since the 1990s. Burkina Faso has a total unemployment rate of 6.5% - it shows a rising trend of unemployment over the 2000s from 2.6% in 2000. Mali has a total unemployment rate of 7.8% - a trend of lower rates from its peak in 2007 of 11.7%. Mauritania has the highest unemployment rates of 9.8%, which has been stable for over the last 20 years.

Unemployment is higher for **youth and women** in all five Sahel countries, according to the World Bank data for 2016. The female unemployment rate (share of women aged 15-64 who are without work, but available for and seeking employment as percentage of total labour force) in Chad is 6.8%. Youth unemployment (the share of people aged 15-24 that are in the labour force seeking employment, but unable to find employment) is higher in Chad, but stable for over 20 years, with 10.1%. In Burkina Faso unemployment rates for women are increasing, with 3.6% female unemployment rate in 2007 and 9.3% in 2016. Youth unemployment is rising as well, but at a lower rate with 4.9% youth unemployment in 2007 and 8.6% in 2016. In Mali, female unemployment rates are slightly higher in 2015 and 2016 with 8.6%, but not high as in the peak year 2007 with 13.9%. More significantly, Mali shows a rise in youth unemployment in 2015 and 2016 to 18.1%, which means that it is back to the same high level as in the peak year of 2007. Mauritania has high levels of youth unemployment (17.8%) and female unemployment (12.6%) over a period of 20 years, just with a small decline in female unemployment rates since 2000 (14%). Niger has very low official unemployment rates, including for youth (0.5%) and women (with 0.2% - the only country where it is lower than the total unemployment rate).

¹ World Bank, Jobs Data, 2016 (searched for Burkina Faso, Chad, Mali, Mauritania, Niger and sub-Saharan Africa: <http://datatopics.worldbank.org/jobs/> (derived October, 2018).

Most of the G5 Sahel are amongst the countries with the highest **employment rates in the agriculture sector** (World Bank data for 2016). Chad has one of the highest level of employment in agriculture in sub-Saharan Africa with 87% and stable at that level for over 20 years (5% industry; 8% services). Niger and Mauritania also belong to the countries with the highest employment rates in agriculture, both with 76%. In Mauritania the level is slightly decreasing from 80% in the 1990s, as services have grown slightly, while more stable for Niger. In Niger, 7% worked in industry and 17% in services in 2016. Also in Mauritania, 7% worked in industry and 17% in services (13% in 2000). Data from Mali and Burkina Faso show different trends: in Mali employment in the agricultural sector is growing since 2004, while in Burkina Faso jobs in agriculture are vastly declining since 2006. In 2016 agriculture counted for 62% of employment in Mali (42% in 2004), while 8% in industry and 30% in services. In Burkina Faso, 29% of total employment is in agriculture (81% in 2006), while 32% in industry and 39% in services in 2016.

The **population** in the Sahel countries is young. The World Bank data (2017) estimates that nearly half of the population is 15 years or younger, with the exception of Mauritania which is 40% in 2017 (Niger has the highest of 50.2%, followed by Mali 47.7%, Chad 47.1%, Burkina Faso 45.2%).² In Mali 40% of the population is aged between 15 and 40 and youth unemployment rates are extremely high in the rural areas (FAOb, 2017, p.1). The population is expected to grow more than double in size, for example the prognoses for Mali is that the population will increase from the current 18 million people to 45 million in 2050 (IMF, 2018a, p.6). The expected net annual increase in the labour force in Mali is around 200 thousand workers in the next 20 years (IMF, 2015, p.13). The **urbanisation rate** is low in the G5 Sahel countries (in particular in Chad and Burkina Faso) and gradually growing over the years: in 2017 22.8% of the population in Chad were living in urban areas, 31.5% in Burkina Faso, 41.4% in Mali, 49.4% in Niger and 61% in Mauritania.³

Gender gaps are lower at higher levels of education, however, the unemployment rate increases with education. For example, in Burkina Faso the unemployment rate among young graduates is 34.5% for higher education graduates and 17.2% for secondary education graduates (IMF, 2018b, p.5). Female unemployment rates are higher than those of men at all levels of education and reach in Mali 34% for higher educated women. Paid employment rates for females are also lower in the Sahel countries compared to the West African region. For instance, in Niger's capital city Niamey the paid employment rate for females is 29%, while 57% in Lome, Togo (Nordman et al., 2011).

Up till now employment is still dominated by the **informal sector** with all countries above 90% of workers in informal jobs (% of total non-agricultural employment): with in Burkina Faso 94.6% of workers in informal jobs (IMF, 2018b, p.6), in Mali 96.6%,⁴ and 93% in Niger. In 2015 the number of formal jobs in Burkina Faso was estimated at 685,625 of which 22.6% are government employees. 24.2% of the total formal jobs were occupied by women, 33.3% are women with jobs in the public sector and 21.6% are women in private sector jobs in 2015 (IMF, 2018b, p.6). In 2010 in Niger there were 40,400 public employees of those 30% were women (Danish Trade Union, 2014, p.15). In 2007, there were 54,000 persons in formally waged private or semi-public employment (Danish Trade Union, 2014, p.15). It is estimated that 80% of the mining workforce

² Data from World Bank Data website: <https://data.worldbank.org/indicator/SP.POP.0014.TO.ZS?locations=TD-ML-BF-MR-NE> (derived October, 2018).

³ Data derived from Statista Portal: <https://www.statista.com/> (October, 2018).

⁴ International Labour Organization, ILOSTAT database.

works in the informal sector.⁵ Informal labour in the Sahel countries is characterised by child labour, limited demand and small market, no access to soft loans or with high interest rates, lack of equipment, tools and material and limited support for increasing skills. In Mauritania the informal labour force also includes a widespread increase of migrant labour force that monopolises certain jobs in the informal sector such as construction (al-Mahboubi, 2016, p.155).

3. Employment in food economy

Allen et al. (2018, p.8) show that for the total food economy (including food agriculture, processing, marketing and food-away-from-home) the share of employment in the food economy compared to total employment in Burkina Faso, Niger, Chad and Mali are the highest for all West-African countries: it accounts for more than 80% of total employment, while Mauritania is below the West-African average with 52%. Employment patterns in the food economy of West Africa are primarily driven by local food demand (Tschorley et. al., 2016). At the regional level, the vast majority of food consumption comes from local food production, with food imports representing 8% of total food expenditure (Allen & Heinrigs, 2016), counting for 4% in Mali and Burkina Faso, 5% in Mauritania and 7% in Niger (no data is available for Chad) (Allen et al., 2018, p.9).

The share of food economy employment in the total rural employment for the Sahel is the highest for the West African region, with the exception of Mauritania (with Mali, Niger and Burkina Faso all well above 90%). Niger and Burkina Faso also have the highest share of food economy employment in the total urban employment (50% and 47%) (Allen et al., 2018, p.15). The Sahel countries show lower food agriculture employment in urban areas (2% of the total food economy employment in Mali, 4% in Niger and 7% in Burkina Faso) in comparison with other West African countries (e.g. Senegal 13% and Ghana 18%) (Allen et al., 2018, p.13). In urban areas there are some micro-plots and in some urban areas fishing communities contribute to food agriculture in urban areas, however, Allen et al. (2018) expect that the majority of employment in urban areas in the segment food agriculture are “likely to be inflated by households living in urban areas but engaging in farming activities located outside urban boundaries” (2018, p.15). What the literature shows is that the food economy in the Sahel countries, measured in employment, both in rural and urban areas, is important.

On-farm employment in food economy

Within the food economy the food agriculture segment represents the highest rate of employment, with Mali, Niger, Burkina Faso and Chad again among the countries with the highest rates in West Africa all well above 80% (Allen et al., 2018, p.9). 99% of employment in agriculture relates to food agriculture (Allen et al., 2018, p.7). However, farmers in Burkina Faso and Mali in particular rotate food crops with the non-food crop cotton, and as such are partly working in the food economy. Furthermore, those in agriculture work significantly fewer hours than those in downstream segments of the food economy. On average, farmers work 26 hours a week (first declared activity only), compared to 39 hours on average in downstream segments (Christiaensen & Premand, 2017). This time-related, or visible, underemployment in agriculture is linked to its seasonal nature and/or contexts where surplus production (and hence additional labour effort) does not pay because markets are absent or too costly to reach (Christiaensen &

⁵ Derived from the US Department of State, Bureau of Democracy, Human Rights and Labour, Niger Country Report on Human Rights Practices (2013).

Premand, 2017). Furthermore, the agriculture labour force is predominantly male in the region, for example 58% in Mali (AGRA, 2017).

Estimating employment shares for Niger and Burkina Faso using FTEs instead of declared activity, shows that the share of food agriculture in total food economy employment drops significantly, from 91% to 74% and from 87% to 75%, respectively (Allen et al., 2018, p.10). While time-related underemployment affects agricultural activities in particular, the share of off-farm food economy employment in these countries is doubled. For all countries for which data are available, including Niger, Mali and Burkina Faso, estimated employment shares using FTEs, shows a decrease of food agriculture in total food economy employment by 10% (7 percentage points), from 75% to 68%. Consequently, the share of off-farm food economy employment in total employment increases by 30% (from 25% to 32%) (Allen et al., 2018, p.10).

Food crops – Food crops that are mainly cultivated in the Sahel region are: maize, millet, rice and sorghum (which are the main staple crops). For example, 90% of farmers in Mali produce millet, sorghum, maize and rice for subsistence (AGRA, 2017). Some farmers in the region also cultivate tubers, cashew, peanuts, legumes, cowpea, sesame and groundnuts, also for subsistence. Maize has become an important cereal crop, in particular in rotation with cotton in Mali and Burkina Faso. In Mali and Burkina Faso it has surpassed sorghum and millet as the main staple crop. Farmers use fertilizers for cotton that are more accessible and affordable on the local market for maize (Laris et al, 2015, p.3). For example, Koulibali et al. (2011) found that as cotton prices fell, farmers increasingly shifted fertilizer to maize. As a result, the Malian cotton trade agency CMDT recently began to provide input loans for fertilizer and herbicides for maize as a diversification strategy and to prevent a drop in cotton yields.

Laris et al. (2015) show that Malian farmers gradually perfected the practice of reallocating fertilizers to different crops, they also reduced the practice of growing food crops in long fallow rotational agriculture. “The age-old practice of dual production logic remains, but food crop production has gradually become more intensive. As such, the older practice of intensively farming cash crops and extensively farming food crops has been transformed” (Laris et al., 2015, p.11). In the Siby area in Mali, the numbers are quite dramatic; the area under agriculture declined by 24% in the period that included devaluation while the amount of area annually farmed increased from 28 to 43% (Laris et al., 2015, p.11). In their survey, farmers in Mali argue that maize has benefits including producing higher yields per hectare. It can be sold at anytime and anyplace, unlike cotton. It matures more rapidly than sorghum and thus serves to shorten the hungry season (the period in late summer, when grain stores are low or depleted and the new harvest is not yet in). However, with higher market prices for cotton since 2009, cotton production is again on the rise.⁶

Livestock – Livestock contributes approximately 38% of agricultural GDP and around 15% of total GDP in the Sahel region (FEWS NET, 2017). It is also one of the main activities generating revenue in these countries’ trade balances as it is the third most important export product for most G5 Sahel countries. For example, in Niger 21% of export earnings come from livestock sector (FEWS NET, 2017, p.43). Livestock are the most traded products between West African countries, which makes it a driving force behind regional economic integration. The sector employs approximately 30% of total employment (in case of Mali). The rural population in Mali,

⁶ See data in <https://www.indexmundi.com/agriculture/?country=ml&commodity=cotton&graph=production>

living in settlements of less than 5,000 inhabitants and involved in livestock farming systems, is extremely significant: at 60% of the total population. This share is expected to decrease down to 40% by 2050 (Ly et al., 2010). The expansion of crop cultivation has increased significantly over the last decennia, while the increase of TLUs is less significant (Ickowicz et al., 2012).

In cotton-growing areas farmers are increasingly integrating animals into their production system. These animals are on the move for months and cover long distances. At the same time pastoralists' families tend to settle down without altering their livestock. This partial sedentarisation enables these families to have access to healthcare, education, supplies and to the country's political life. By settling most families develop agricultural activities (Inter Reseaux, 2017, p.7). Agro-pastoralism and agro-breeding highly prevail in this region. For example, in Niger, 60% of livestock is owned by agro-breeders and agro-pastoralists in the South (Inter Reseaux, 2017, p.4). Agro-pastoral systems provide many things such as the supply of high protein foods (milk, meat), manure (for soil fertilisation) and energy (transport, water extraction, animal traction). They also produce skin, wool and leather. They therefore supply an entire economy and provide a considerable amount of employment in the production chain (Inter Reseaux, 2017).

Fisheries – There are three fish sources in the Sahel: Mauritania's Atlantic coast, inland river systems and lakes. Fish farming is still a small business. Fishing is an important livelihood activity in the Sahel, but both inland and coastal fisheries are suffering from overfishing and habitat degradation (USAID, 2017, p.4). Inland fishing occurs along all major rivers and lakes of the region, including the Niger River (Mali and Niger), the Senegal River (Mali and Mauritania), Lake Volta (Burkina Faso), and Lake Chad (Chad and Niger) (USAID, 2017, p.4). The coastal and maritime zones of the Sahel are among the richest fishing grounds in the world (UN, 2018, p.6). In Mauritania, fisheries account for 10% of GDP and 50% of export earnings (USAID, 2017, p.4). Estimates suggest that Mauritania's fisheries are being exploited at a rate of 30-40% higher than the maximum sustainable yield (USAID, 2017, p.4). Its fisheries are exploited by both domestic fishermen and foreign fleets (USAID, 2017, p. 4), mainly from EU countries. The EU and Mauritania renewed their Fishery Partnership Agreement in 2016 (European Parliament, 2018). The agreement now allows EU vessels to fish shrimp, tuna, demersal fish and pelagic fish totalling up to 281,500 tonnes each year. On its end the EU will pay for the catches, and commit €59.125 million every year to the partnership with €4.125 million going into supporting activities of the fishing communities in the West African country including environmental sustainability, job creation and tackling illegal and unregulated fishing.⁷

However, there is criticism that the spill-over effect of the trailer fishing on the coast of Mauritania is very small for the local processing industry to add value and create jobs in the sector. The argument is that although Mauritania has received over €1 billion in return for EU fishing rights for the last 25 years,⁸ there is little or nothing to show as to how the money is benefiting local fishing communities or improving the country's fishing sector. A Greenpeace report (2012) points that the EU's presence is unsustainable and a hindrance to Africa in developing its own robust fishing sector. "The impact on local communities is huge. With less and less fish local fishermen are forced to make dangerous journeys further away, some simply give up and move away. Trawlers trash traditional fishing gears, which the locals can't afford to replace. Whilst nominal deals may have been done with governments, it is local communities and Africa's seas that pay

⁷ See also article on EurActive website on 3 June 2016: <https://www.euractiv.com/section/agriculture-food/news/mauritania-fisheries-deal-receives-mixed-response/>

⁸ Idem (EurActive: 3 June 2016)

the price.” Daniels et al. (2016) write that a ‘crack down’ on illegal fishing by foreign commercial fleets operating in western Africa and further investment in the sector could lead to 300,000 new jobs.

Two million people in Chad and neighbouring countries including Niger rely on Lake Chad (World Bank, 2015). The fisheries sector around Lake Chad consists of thousands of artisanal fishers using fishing gear and boats based on traditional designs. The fishers exploit a wide range of fish species within a complex of lake, river, floodplain and swampland environments, of which they have a good knowledge and understanding (FAO source).⁹ Fishing operations form an integral part of many household economies, along with farming. A significant proportion of the catch is smoked and dried. After processing, fishery products enter a well-organised commercial fish-marketing chain, which extends to the large urban markets of southern Nigeria, including Lagos, Ibadan, Onitsha and Enugu, where dried and smoked fish is in demand by local consumers (FAO source).¹⁰ In Mali there are on average 80,000 fishermen, as there are sedentary and nomadic fishermen, with some peak periods of 225,000 fishermen (WUR source).¹¹ For job creation and food security some emphasis is on fish farming and aquaculture in the region, in particular related to semi-intensive aquaculture systems near urban areas, integrated extensive systems (i.e. rice-fish farming), low-cost breeding programmes that involves local farmers and researchers.¹² Fish farming benefits mainly women, who, like in Chad smoke the fish and sell it on local or regional markets.

Non-farm employment in food economy

The three off-farm food economy segments (food marketing, food processing and food-away-from-home) have a small share in the total food economy employment in Mali and Niger both with 9%. It is 13% in Burkina Faso, 15% in Chad and 24% in Mauritania. At the West African regional level the average is 22% (Allen et al, 2018, p.10-11). Although the distribution of employment in the off-farm segments varies by country, there is a clear pattern which shows that food marketing is the largest off-farm segment. In Niger it accounts for just 5% of the total food economy employment, in Mali 7%, Burkina Faso 9%, Chad 10% and Mauritania 16% (Allen et al., 2018, p.11). Employment patterns in food processing and food-away-from-home (restaurants and street food stalls) segments across countries are less significant around 2% for each country (with the exception of Mauritania where food processing employment rate is 5%). Together, these three non-farm employment in food economy segments account for 31% of total non-farm employment in the West African region (Allen et al, 2018, p.10).

The non-farm employment in food economy relates more to urban areas. With employment in food processing in Mali, Burkina Faso and Niger respectively 34%, 41% and 40% based in urban areas (Allen et al., 2018, p.13). Food marketing is even stronger related to urban areas in these countries (46% in Mali and 57% in Burkina Faso) as well as food-away-from-home (81% urban in Mali, while 43% in Niger) (Allen et al., 2018, p.13). Because the off-farm segments are more related to consumer side and with urban food demand, the development of the off-farm segments of the food economy is closely linked to changes in household dietary patterns. These changes, related to Bennett’s Law, have recently been documented for West Africa (Allen & Heinrigs,

⁹ Source FAO: <http://www.fao.org/blogs/blue-growth-blog/inland-fisheries-a-new-management-plan-for-lake-chads-fisheries-sector/en/>

¹⁰ Idem: FAO.

¹¹ Source PPT presentation WUR University, Wageningen, Netherlands: <http://edepot.wur.nl/300320>

¹² Idem: WUR University.

2016; Staatz & Hollinger, 2016) and show that, with rising income and urbanisation, consumption of fresh and perishable products, such as fruits and vegetables, dairy, meats, and processed foods, increases rapidly.¹³ Perishable and processed foods demand more value added after the farm in terms of cold chains, processing and packaging. The employment effect of these food demand transformations is that work moves increasingly into the off-farm segments of the food system. In addition, the growth in food marketing activities is closely linked to the development of food markets, although these markets are less developed in the G5 Sahel countries in comparison with some other sub-Saharan African countries such as Ghana, Nigeria or Kenya (Allen et al., 2018).

Food processing - The food processing sector is the largest manufacturing sub-sector in terms of employment in the region. Although it accounts for just a very small amount of food economy employment, it represents in Niger, Burkina Faso and Mali (the countries of which data is available) over 30% of total secondary sector employment. In Niger it is the highest with 50%, followed by Burkina Faso 38% and Mali 32% (Allen et al., 2018, p.11). Many of these jobs are in artisanal and small- and medium-sized enterprises in the informal economy, however, looking to formal employment, food manufacturing stands out as the most important contributor to value added and a contributor of significance to employment (Hebous & Tran, 2017). With the potential to generate more formal jobs as food markets are created and agriculture productivity increases.

Looking at the food processing sector from a jobs perspective, there are four important features, related to West Africa (including Sahel):

- Agro-industries (e.g. millers, beer breweries, processors) are more likely than other industry sectors to locate outside primary cities including in small towns and more rural areas (Christiaensen & Lawin, 2017).
- Food processing creates strong forward and backward linkages with other food and non-food system activities. The food processing sector is a growing outlet for agricultural products, which generally translates into more stable demand (Allen et al., 2018).
- Employment in the processing sector is dominated by women and tends to be unskilled and labour intensive, providing more inclusive opportunities (Allen et al., 2018).
- Demand for food processing activities is projected to continue to grow over the medium-term mainly driven by urbanisation (IFPRI, 2017). However, if this growth is concentrated in large-scale industrial processors, this will have a different impact. The literature shows that an unreliable supply of local raw materials of consistent quality (mainly the case in the Sahel), will automatically result in an over-reliance on imported commodity inputs for large-scale industrial processors (Staatz & Hollinger, 2016). Hence, from an employment perspective, growth in food processing sector will crucially depend on the capacity of local processors and agri-businesses to source from domestic production (Staatz & Hollinger, 2016).

Food marketing – Food marketing is the largest off-farm segment, accounting for more than 70% of all non-agricultural food economy jobs. Food marketing jobs (transport, storage, wholesale, retail) represent 27% of all service sector employment in West Africa (Allen et al., 2018, p.11-13). The development of these activities is closely linked to urbanisation and the

¹³ See also K4D Helpdesk report “Urban Food Systems” (Tull, K., 2018) that was the input report for the thematic session on Urbanisation, Nutrition and Purchased Food organised in the Learning Journey on Changing Food Systems. <http://opendocs.ids.ac.uk/opendocs/handle/123456789/14032>.

reliance on markets for gaining access to food. However, not only urban food markets are important for job creation as rural households rely increasingly on markets to access foods. In Burkina Faso, rural households spend more than 60% of their food budget at markets, of which 36% is spent on processed foods (Allen et al., 2018, p.12). Also, changes in food demand and reductions in transport costs increase demand for foods produced further away (Tacoli & Agergaard, 2017), creating job opportunities in non-farm food economy. The more urbanised a country (e.g. Mauritania), the higher their shares of total food employment in marketing activities. However, Mali and Niger are among the least urbanised countries in the region, and they have the lowest total food employment in marketing activities (respectively 7% and 5%) (Allen et al., 2018, p.11). Like food processing, food marketing activities will continue to grow due to urbanisation and dietary changes in demand, which will keep the segment as the largest number of off-farm food jobs in the years to come.

Food-away-from-home - Food-away-from-home accounts for 2% of all food jobs and 10% of off-farm food jobs in West Africa and the percentage is much smaller in the Sahel countries: in Mali, this segment counts for 0% and Niger 1% to the total food economy employment (Allen et al., 2018, p.11). The main factor behind this is the small urbanisation rate, while the segment in the food economy becomes more important with further development of food markets, changing working conditions (e.g. commuting) people in urban areas (including the poor, who have to eat more often food away from home) (IFPRI, 2017). Differences that could explain who eats more away are cultural factors, but also differences in city size and configuration, transport network and working hours. Food-away-from-home is closely associated with incomes and is projected to grow faster than other food segments if economies grow and urbanisation rates continue to increase (Staatz & Hollinger, 2016). In addition, the sector is highly important for women's employment (for Niger see: Otoo et al., 2012) and generates high value added, also on imported products. It also creates strong linkages with other food sources providing regular demand for other food economy activities (Tschirley et. al., 2016).

4. Employment in non-food agriculture

Cotton sector

The cultivation of cotton in Mali, Burkina Faso and to a lesser extent in Chad, is a significant contributor to GDP, trade balance (through export) and employment (Baquedano et al., 2010). Cotton farming is done primarily by smallholders in the region, and remains extremely labour intensive with no mechanisation, and is the farmers' main cash crop. In Burkina Faso and Mali the production of cotton is for 66% in hands of poor or nearly poor farmer households (ILO, 2016, p.4). Burkina Faso has the highest hectares in cotton cultivation in the region (850,000 hectares in 2017/18 and 1.4 million 480 lb bales).¹⁴ The average farm size in Burkina Faso is 3.9 hectares and according to the FAO 4 million Burkinabes (22% of the population) support themselves through activities connected to the cotton sector. The cotton productivity in Burkina Faso was for a long time higher than in Mali and did not see a major dip in productivity in the 1990s (see for Mali below). It is the main export product after gold; 98% of the cotton is exported (USDA GAIN, 2018). Cotton seed is processed into oil and delinted seeds. Burkina Faso has 150 cotton seed oil factories, but only 80 comply with CODEX guidelines. Burkina Faso has only one spinning mill, FILSAH, which produces 5,000 MT of yarn per year (USDA GAIN, 2018). High production

¹⁴ See: <https://www.indexmundi.com/agriculture/?country=bf&commodity=cotton&graph=production>

costs and electricity shortages are the biggest challenges to expanding domestic yarn production. 40% of this yarn is sold locally to produce artisanal products; 60% is exported to European markets (e.g., Rotterdam, Barcelona, and Hamburg) (USDA GAIN, 2018). In February, 2018, media sources reported that Burkina Faso plans to open a new textile mill worth 220 billion CFA francs (US\$366 million).¹⁵

In Mali 740,000 hectares were planted with cotton in 2017/18 with production of 1.3 million 480 lb bales.¹⁶ 98% of the cotton is exported, the remaining 2% remains in country for processing into artisanal weaving yarns (unbleached, white, and dyed thread) and printed fabrics (bogolan fabrics, woven cloth, and woven koba). According to Tefft (2010) cotton is Mali's number two export earner after gold (80% of export earning for gold and cotton combined) and contributes 15% of government revenues as well as 8% of GDP. Cotton is thus critical to the national economy as well as many local livelihoods. Cotton was the driver of successful agricultural development during the 20 years following Mali's independence in 1960. Cotton farmers were supported by research, extension services, and input credit resulting in substantially increased incomes and agricultural productivity. As a result, cotton yields more than tripled by the early 1980s (Baquedano et al., 2010). Following a steady rise over several decades, however, cotton yields began to decline during the 1990s, however, it has stabilised since 2008 around 800 kg/ha and recently increased to nearly 1,000 kg/ha (Dembele, 2017, p.1558). Benjaminsen (2010) suggested that devaluation of the West African currency in 1994 drove up the cost of inputs resulting in a rapid expansion in cotton growing as farmers attempted to maximise profits. His argument is that Structural Adjustment Policies (SAPs) reduced the subsidies on fertilizers resulting in a price increase and subsequent lower fertilizer use which pushed farmers to increase acreage to compensate for lower yields. Since the downfall in 2008-2009 (international market crisis, high price of cotton inputs and low farm gate price of cotton per kilogramme), the number of farm households working in cotton is rising again and production is rising to a record level of 725,000 tonnes in 2017/18,¹⁷ helped with better prices and improving international markets. There are now around 130,000 farm households involved in the cotton production in Mali (Dembele, 2017, p.1559), an increase of 40,000 between 2009 and 2015.

In Chad the cotton sector is in decline. The expectation is that producers will decide to grow other crops or find off-farm employment since COTONTCHAD, the national ginning mill company, has been financially unstable and unable to fulfil its contracts and distribute inputs. 2018/19 cotton production is forecast to decrease 6% from the previous season area and is now estimated at 110,000 hectares (USDA GAIN, 2018).

Expectations for 2018/19 cotton production in the Sahel is good according to the 2018 USDA GAIN report. However, the forecast is that the total area for Burkina Faso, Chad, Mali, and Senegal is projected to decrease to 1.67 million hectares due to the possibility of limited credit and inputs due to the problems in Burkina Faso and Chad. Many Burkina Faso cottons farmers are reportedly in default and unable to pay loans for the last crop season due to low production, which may bar them from accessing financing. 2018/19 total cotton production for all the aforementioned countries is estimated to rise 4% to 2.86 million metric tons on expectations of

¹⁵ The project is supported by the Government of Burkina Faso and several financial partners (i.e., Afreximbank, the African Development Bank, Bank of Africa, Ecobank and Lilium Capital). It will be led by the Turkish company Ayka Textile which also invested in Ethiopia's largest textile mill. Since reliable energy is a major constraint, a 35-MW coal-fired power plant reportedly will be built next to the new mill, which is expected to be operational by July, 2018 (source: USDA, GAIN, 2018).

¹⁶ <https://www.indexmundi.com/agriculture/?country=ml&commodity=cotton&graph=production>

¹⁷ Idem: Index Mundi.

strong prices, good weather, and better pest management. Total exports are expected to increase 3% on higher exportable supplies and strong international demand (USDA GAIN, 2018). Burkina Faso and Mali are respectively the number 6 and 7 exporters of cotton in the world, with the main destination Bangladesh (ILO, 2016, p.2). For Chad cotton is the fourth export product, counting for 1.7% of total export earnings.

Common themes that emerge across all three countries, include (Usher et al., 2013, p.3):

- **Status of women:** In each country, women play an important role in the cultivation of cotton; however, women face serious structural gender bias in the sector. Key challenges include: occupational segregation, women's unequal access to property title and finance, wage discrimination, women's reproductive health risks associated with pesticide exposure and a lack of voice within household structures, field work and producer organisations.
- **Child labour:** Child labour can be found in cotton production in all three countries, although the scale of the issue varies between countries. In all three countries, one of the most pressing challenges is to reduce children's exposure to hazardous working conditions, including pesticide application and use of sharp tools. For example, in 2011 there was a widely publicised exposé of child labour found in fair trade and organic cotton producing in farms Burkina Faso sourced by Victoria's Secret which testifies to the ongoing difficulties of monitoring compliance (ILO, 2016, p.25).¹⁸
- **Wages and incomes:** Work in cotton production tends to be characterised by low income and economic insecurity. In all three countries, it is estimated that average incomes for households are very close to (and sometimes below) the World Bank's extreme poverty line. Waged workers often receive wages below legal minima. Low productivity (caused by lack of knowledge and/or access to credit) is a major barrier to improving incomes. Wages are a pivotal concern for cotton workers, who are often amongst the most vulnerable members of (often already vulnerable) cotton producing communities, yet this is not expressly addressed by the BCI Production Criterion on decent work for smallholders (whereas wage criteria do exist for medium and large-sized farms) (Usher et al., 2013). Wages for hired labour on smallholdings also interact closely with risks associated with involuntary labour, and have important implications for livelihoods. Improvement is needed on wages in smallholder farming that could address key issues such as: timeliness and frequency of payments, records of (substantial) wage advances, in-kind payments and links between wages, profitability and productivity.
- **Health and safety:** One of the major health and safety risks in cotton production across all three countries is exposure to hazardous chemicals, as a result of the lack of use of personal protective equipment (PPE) when applying pesticides. This has particularly serious health implications for women and children.
- **Forced or bonded labour:** Forced or bonded labour is present in cotton production in all three countries, although its prevalence is difficult to pinpoint with any accuracy given that, by its nature, it is mostly a hidden phenomenon.

¹⁸ 'Victoria's Secret revealed in child picking Burkina Faso cotton,' Cam Simpson, December 15, 2011, Bloomberg Markets at: <http://www.bloomberg.com/news/articles/2011-12-15/victoria-s-secret-revealed-in-child-picking-burkina-faso-cotton>.

Shea nuts

Some nuts are used in non-food processing, like the shea nut of which the oil is extracted from its kernels and used nationally and internationally in cosmetics and pharmaceuticals. The processing and sales represent significant income earning opportunities for rural women who are the main stakeholders in the production chain (Bup Nde et al., 2014, p.5). Shea nuts and its products are listed among the top non-traditional exports in countries in West-Africa, including the Sahel region. In Burkina Faso, it is one of the main export products and it makes a contribution of about US\$6 million to the national economy. Mali and Burkina Faso are among the countries classified as in the high production zone (potentials of producing 70,000–300,000 tons per year), while Chad is classified among countries with average production zone (potentials of 10,000–70,000 tons per year), and Niger as low production zone (less than 10,000 tons a year) - no information is available for Mauritania (Bup Nde et al., 2014, p.2). Though semi mechanised and some fully mechanised productions methods are employed in the major shea producing countries of the Sahel, most of the rural women use traditional processing procedures. Major importers of shea are the European Union, Japan and the USA. One of the main challenges is to protect the trees from burning and exploitation for wood and charcoal production (Bup Nde et al., 2014, p.1).

The international value chain of shea is relatively new. Burkina Faso and Mali are amongst the leading export countries of shea products. In Burkina Faso, the value of shea nut exports increased threefold during 2000-2005 and sevenfold during 2005-2012 (Rousseau et al., 2015, p.413). In the shea nut value chain in Burkina Faso, market globalisation has had only a weak impact on the restructuring of the regional supply chain despite the boom in the shea trade and the arrival of leading foreign firms. “The main impact of globalisation of the shea nut value chain has been on prices and volumes. The quality standard, organisation, and governance of the value chain have barely been affected” (Rousseau et al., 2015, p.413). In 2000 the export was mainly raw shea nuts (95%), while in 2010 the export of shea butter from the region had increased to 35% (Rousseau et al., 2015, p.415). The processing creates jobs, mainly for rural women in Mali and Burkina Faso. They increasingly organise themselves in women groups and cooperatives, with support from NGOs, to avoid being dependent on middlemen and traders (Sibide et al., 2012). However, a study in Burkina Faso found that 94% of the women sampled were involved solely in the collection of shea nuts, and 59% in the commercialisation process (Pouliot, 2012), which shows that women’s participation in the more profitable parts of the shea value chain is still limited.

A more recent study of Chen (2017) also in Burkina Faso shows that the shea sector contributes to women’s economic well-being with 33% of the women involved making less than CFA 100,000 (US\$171) per year, 50% earn less than CFA 200,000 (US\$342) per year and 25% earn more than CFA 480,000 (US\$821) per year. The women involved in all stages of shea butter production (not only nut collection and nut processing, but also transformation into butter) earn on average much more than only collector. Chen (2017) concludes that through empowerment of women in shea value chains women are increasingly involved in higher profitable aspects. These actors are present in all areas of the value chain. They lead within the collection and also transform shea nuts into products such as shea butter, soap and pomade. This group accounted for 42% of the total sample. However, in her sample 50% of men were positioned in the role as leaders of their groups; they earned 44 times the income of women leaders because only men occupy the more profitable sections of the value chain: half controlled all aspects of shea

production, and half were traders of shea nuts or derivatives. Only 23.8% of women received an income solely from shea (Chen, 2017, p.X).

5. Employment in extractive sector and manufacturing

Extractive sector

The literature on employment and modern large-scale mining shows that it does not employ many workers. It has historically been capital-intensive, and this feature increased with technological progress (Chuhan-Pole et al., 2017). “At the country level, this magnifies the extent of the windfalls through exports and central government revenue, but it may also lower the amount of value added paid to indigenous factors, mainly labour” (Chuhan-Pole et al., 2017, p.71). Thus, extractive industries, like oil and gas industry or mining industry, could be characterised of being cut off from the domestic economy except through royalties and taxes. Partly in response to criticism that employment in mines is low, mining companies and chambers of mines argue that although globally small, the number employed is locally significant and can raise average incomes and expenditures in the vicinity of a mine. It is also argued that mines are linked to local industry through the use of inputs of other goods and services, and that employment is stimulated through these backward linkages (Chuhan-Pole et al., 2017). Despite the risks that mines pose to agricultural productivity (for example, through environmental pollution or structural shifts in the labour market), there is no evidence in literature (including Mali and Burkina Faso) of a decrease of agricultural production in mining districts (Chuhan-Pole et al., 2017, p.166).

Gold mining in Burkina Faso and Mali - Mali’s gold production represents 95% of the country’s mineral production (Antil, 2014, p.13). The mining industry officially employs 3,700 people in Mali, mainly in gold mining – an amount that over the years has not very much changed (Chuhan-Pole et al., 2017, p.73). For Mali, Sanoh & Coulibaly (2015) report a ratio of 14 national workers to each expatriate, and that on average 78% of jobs are held by people working in mines located in three communes (local government entities): Gouandiaka, Sadiola, and Sitakily. Employees of mining firms in Mali earn US\$1,200 a month on average. National labour survey data suggest that the mean income from mining is higher than the average income for all other economic activities, and considerably so when compared with agriculture or industry. The study also shows that for every one mining job created, 1.67 jobs are created elsewhere through backward linkages and expenditure effects (Sanoh & Coulibaly, 2015). In other words, the multiplier effects are limited, partly because of the capital intensity of the mining industry, but mostly because of the lack of local cost-effective procurement opportunities (Chuhan-Pole, 2017, p.72). This could change over time, as mining companies become better acquainted with local markets and suppliers, and as local entrepreneurs learn to take advantage of the new opportunities arising from the expansion of mining activity. However, even where local procurement is stimulated, including in services such as catering, vehicle repair, machine shop services, welding, metal work, electrical work, and plumbing, the proportion of inputs sourced locally remains low (Chuhan-Pole, 2017, p.72).

The Malian government is keen to unlock the economic potential of other resources, such as bauxite, manganese, lithium and uranium. In April 2017, the Chamber of Mines announced that following several new discoveries, bauxite reserves in Mali’s Falea project are now estimated at 1.63 billion tonnes (Bt), which is equivalent to 572t of refined aluminium (Vella, 2017). A spate of investment deals signed with China, totalling about \$11bn, aims to unlock the potential of other

minerals. BMI Research forecasts that Mali's mining industry will experience a value growth of 10% from 2017 to 2021, putting it above top African mining markets, such as the Democratic Republic of Congo (DRC) (Vella, 2017).

Burkina Faso's gold mining sector is like Mali the biggest contributor to export earnings and with few linkages to other productive markets. Research results (Zabsonré et al., 2016) suggest that areas hosting gold extraction have better average living standards in terms of headcount ratios, poverty gaps and household expenditures than their counterparts without gold. Although the effects are not statistically significant on inequality, it is robustly positive. Before 2006, the gold mining sector was dominated by artisanal and small-scale gold mining, and the contribution of the sector to the national revenue was not substantial (Zabsonré et al., 2016, p.6). However, since 2007 the government has initiated reforms to increase revenue from gold production for poverty reduction. From 2007 to 2010 seven gold mining companies came into operation and gold production has been multiplied by eight-fold (Zabsonré et al., 2016, p.6). More than 600 permits are currently assigned. In relation to gold mining, these include permits issued to the Canadian companies High River Gold Mines Ltd., IAMGOLD Corp. and Semafo Inc., the British companies Avocet Mining plc and Cluff Gold plc and another company, Mining Corp., based in the British West Indies. Volta Resources Inc (Canada) meanwhile is mining for copper and gold in the Gaoua region since its start in 2014 (Antil, 2014, p.17). Burkina Faso also has large phosphate and manganese deposits (Antil, 2014, p.17). EITI report (2009) drawn up by KPGM has also pointed out the existence of nickel, iron, graphite, lead, pyrites and antimony.

Artisanal mining is still a very important sector in Mali and Burkina Faso. Exact numbers of employment could not be found in the literature (IMF, 2018, states that "the direct employment effects of large-scale mining are limited, but artisanal mining employment has increased in recent years", regarding Mali), however, the downside is that artisanal mining counts for at least 20,000 children worked in Malian artisanal gold mines under extremely harsh and dangerous conditions (Human Right Watch, 2011) and that the uncontrolled use of chemicals has also had a negative effect on the environment. The findings are backed up by a 2017 Partnership African Canada (PAC) report, which states that the lack of government presence, institutional structure and policy coherence undermine the ability to plan, capture and reap the sector's full economic benefits and breeds child labour and environmental destruction.

Inclusive growth from extractive industry, thus, depends not on direct and indirect employment, but on the extent to which their output can be used to stimulate overall growth that benefits other sectors of economy, and the establishment of the necessary institutional capacity for resource management and enforcement of regulations in the extractive industries (Evoh, 2017, p.67). Plus, regulation, enforcement and formalisation trajectories to artisanal mining activities.

The mining economy of Mauritania – Antil (2014) labels Mauritania as the country in the region where the economy is most likely to be transformed rapidly into a real mining economy. Mining production has existed in Mauritania since the 1960s. It extracts iron, copper and gold, but also phosphate, cobalt, uranium, rare earths, coal, diamonds, manganese and fluor spar. Mauritania has vast mineral wealth including iron and copper, which it has been exploiting since the 1960s (Antil, 2014, p. 16). The Société minière de Mauritanie (SNIM) has its roots in mining pre-independence: after independence it was nationalised and became the flagship of the Mauritanian economy (Antil, 2014, p. 16). SNIM is the largest private employer in the country producing more than 10 million tonnes of iron a year: the state owns a 78.35% share of the company (Antil, 2014, p. 16). SNIM in partnership with Xtrata (one of the largest mining companies in the world) plans to produce 50 million tonnes of iron a year at three sites (Antil,

2014, p. 16). SNIM is also undertaking a joint venture with the Industrial Bank of Kuwait to mine gypsum (Antil, 2014, p. 17). Exploitation of Mauritania's natural gas could supply electricity to the mining sector and be exported to Senegal and Mali (Antil, 2014, p. 17). The World Bank is working with Mauritania to design a robust fiscal framework to manage the revenues from the development of offshore gas (IMF, 2018). However, there are a number of problems in the mining sector, which could limit its potential including corruption, poor governance and low wages (Antil, 2014, pp. 24-25).

Uranium mining in Niger – Niger is the world's fourth largest producer of uranium. Uranium represented 70.8% of Niger's total exports in 2010 (Antil, 2014, p.15). Yet its contribution to the country's GDP only rose to 5.8% that same year. Investments are therefore focused mainly on research and mining uranium and gold. Uranium is the substance most in demand: in 2007 it accounted for 76% of all permits issued for research and production together; gold occupies second position with 19%; other substances, which include coal, account for 5% of the remaining permits (Antil, 2014, p.15). The French company Areva was the first to mine uranium in Niger, but the country opened up its uranium mining to new companies. The main ones are Homeland Uranium Inc. (a branch of the Canadian company, Homeland Energy Group), which holds eight concessions for exploration, and the China National Nuclear Corporation (CNNC) via its Sonima branch, which has been running the uranium mine at Azelik and has been in production since 2010. Production is due to reach 1,000 tonnes a year in the long term (Antil, 2014, p.16).

The mining sector in Niger also involves gold, phosphate and coal (Larsen & Mamosso, 2014, p. 65). As of 2012, 40 mining corporations were registered in Niger and the government had plans to double exports from mining by 2016 (Larsen & Mamosso, 2014, p. 66). Oil production began in 2011, with operations governed by a production-sharing agreement between the government and the China National Petroleum Company (Sangare & Maisonnave, 2018). The Agadem oil field is linked to the Zinder refinery by a pipeline and there are plans to export large amounts of oil through a pipeline via Chad (Sangare & Maisonnave, 2018, p. 581). Because the large-scale mining industry has very few job opportunities, small-scale mining activities have increased in Niger, in particular creating informal jobs for youth men.¹⁹

Oil production in Chad – Chad ranks as the tenth-largest oil reserve holder among African countries, with 1.5 billion barrels of proven reserves as of January 1, 2013 (US Export Agency website).²⁰ The government depends heavily on petroleum for its public revenue as it contributes 60% to the national budget (US Export Agency). Chad's petroleum exports are produced primarily by the Esso Exploration & Production Chad Inc. (EEPCI) consortium and the China National Petroleum Company in Chad (CNPCIC). The Esso consortium began extracting oil from southern Chad in 2003. The 1,100 kilometres Chad-Cameroon pipeline carries Chadian oil exports through Cameroon to the port of Douala. In 2016, Canadian, British, Taiwanese, Russian, and Nigerian companies owned oil blocks and exploration rights and work towards exporting oil from their respective fields via the consortium's Chad-Cameroon pipeline. A joint venture between the Government of Chad's state-owned oil company, Société des

¹⁹ See some more information: <http://theconversation.com/as-more-people-flock-to-nigers-gold-mines-economic-boon-may-become-a-new-migration-risk-75417>

²⁰ <https://www.export.gov/article?id=Chad-Mining-Quarrying-and-Oil-and-Gas-Exploration>

Hydrocarbures du Tchad (SHT), and the CNPCIC refines petroleum for export and domestic consumption at a 20,000 barrel per day refinery 40 km outside N'Djamena.²¹

Recent IMF country reviews show the impact that contractions in oil production due to technical problems and lower oil prices since 2014 had on public spending (IMF, 2018).²² Before 2014 oil export revenues were higher than the value of total imports, but since then the oil export revenues were not enough to pay for the imports (IMF, 2018). While oil revenues decreased, its external debt service burden increased significantly, primarily to Glencore, a commodities trading firm that provided Chad oil-backed loans in 2013 and 2014 against future oil exports. This led to a severe contraction in public spending in 2015–16. The spending stabilised in 2017 and 2018, however, the income per capita, which peaked at US\$1,239 in 2014, fell to US\$810 in 2017 (IMF, 2018). Non-oil activity was also weak and negatively affected by the accumulation of domestic arrears, spillovers from the oil sector on non-oil activity are estimated to have been limited given that government spending (the engine of the nonoil sector) was in 2017 moderately affected by lower oil revenue.

The impact of the crisis on employment in the sector is huge: employment in industry (% of total employment) in Chad was reported at 4.9% in 2017 down from nearly 7% in 2014 and 8% in 2002, according to the World Bank and ILO data.²³ There are opportunities for the country to develop its extractive sector further. Chad's mining sector is underdeveloped and the country's mineral resources are under-explored. The only mineral currently exported from Chad is sodium carbonate, also known as natron. According to a 2010 geologic survey by the Government of Chad, Chad may contain deposits of gold, silver, diamonds, quartz, bauxite, granite, tin, tungsten, uranium, limestone, sand, gravel, kaolin, and salt (US Export Agency website). The Government of Chad is in the process of rewriting the mining code. Chad's natural gas sector is also largely underdeveloped. Less than 1% of Chad's 999.5 billion cubic meters of proven natural gas reserves are exploited for domestic consumption, Chad is not an exporter of natural gas (US Export Agency website).

Although there is no specific data or research on the exact impact on employment of the extractive sector for Chad, by looking at the literature from other countries in the region (Antil, 2014; Sanoh & Coulibaly, 2015; Chuhan-Pole, 2017), the direct and indirect impact of the sector on employment will be small (for example in exploration, jobs could be created in geological surveying, maintenance of oil facilities, oil drilling rigs and accessories, pipeline maintenance, security, trucks drivers and cranes, etc.), but there is a skills gap for local communities to benefit from such job creation.

Manufacturing

The secondary sector (Industry) is dominated by the extractive industry in the region. Manufacturing and construction are industries that are underdeveloped. Manufacturing is in many countries in decline as they cannot compete on the international level. No literature could be found on the exact employment in the sector, however, what is known is that manufacturing is mainly related to the agro-pastoral sector by processing food (crops, seed oils, fish and livestock)

²¹ Information taken from US Export Agency: <https://www.export.gov/article?id=Chad-Mining-Quarrying-and-Oil-and-Gas-Exploration>

²² See also: <https://www.imf.org/en/News/Articles/2018/09/27/NA092818-Stability-on-the-horizon-for-Chad>

²³ Link to the figure at Word Bank Data portal:
<https://data.worldbank.org/indicator/SL.IND.EMPL.ZS?locations=ML-TD>

and non-food agricultural products (cotton and shea nuts). As was written above in this report, 50% of the employment in the secondary sector relates to the processing of food in Niger, 38% in Burkina Faso and 32% in Mali (Allen et al., 2018). The manufacturing in Niger counts for 6% of GDP in 2016.²⁴ In Niger a particular emphasis is given to transformation and the industrial development of high-potential agro-pastoral products. Numerous actions have been carried out at an institutional level to promote industrial development, like the creation of the AN2PI (National Agency for the Promotion of Innovation and Industrial Property). In Burkina Faso manufacturing accounted for 6.6% of GDP in 2015 and the share of manufactured goods in total export of goods was in 2014 10.4% (IMF, 2018b, p.10). The share in GDP of manufacturing in Chad fell in 2002 from 9.1% to 0.2% in 2005. However, this was mainly due to the start of petroleum production in Chad in 2003. The sector recovered and counts for 3.2% of GDP in 2016.

In Mali the trend of de-industrialisation is the sharpest of all countries as its manufactures were competitive only on their local market where protection offsets a fundamental lack of comparative advantage. Since regional integration and trade liberalisation took off it constituted a major challenge. The numbers show that Mali's manufacturing sector has steadily contracted as a share of output as percentage of GDP (from 12% in 1995 to 7% in 2013) while it remained flat in most other countries in West Africa (IMF, 2015). On the other hand the share of output of agriculture remained stable, while in other countries in the West African region its share had declined (IMF, 2015). This could be one of the reason behind the decline of the share of industry employment since 2004 in Mali while the share of agricultural employment in Mali increased. For Mauritania manufacturing is mainly in the fish processing industry, and other small food related processing industries (IMF, 2017).

6. Employment in services

Employment in the service sector remains the same or is increasing gradually over the years in the Sahel countries, (World Bank data website for 2016). However, no significant recent literature could be found that could explain the distribution of employment within the service sector, for both the private and public sectors. The IMF (2016) shows for Burkina Faso that the government wage bill has increased rapidly since 2000, reflecting a large expansion in government employment. 1.7% of the working-age population in Burkina Faso works in public sector, increasing steadily from 0.9% in 2000 (IMF, 2016, p.14). Public employment growth has averaged 7% per year in recent history (IMF, 2016, p.14). Public employment growth in Burkina Faso was more pronounced in the education and security sectors, and amongst mid-level civil servants. The secondary and higher education sector grew fastest, followed by primary education and security services. Public employment growth was strongest amongst mid-level and managerial categories, and in particular amongst contractual workers, which accounted for virtually all change in public employment between 2010 and 2014 (IMF, 2016, p.17). Such detailed recent data on public sector workers could not be found for any of the other countries. However, no further detailed data on workers in education, health care and other sectors in public sector could be found in the timespan of this report.

²⁴ Information from brochure to attract investors: [https://www\(.nigerrenaissant.org/sites/default/files/2017-12/Brochure%20Niger%20V6%20AN%20leger.pdf](https://www(.nigerrenaissant.org/sites/default/files/2017-12/Brochure%20Niger%20V6%20AN%20leger.pdf)

Data on job distribution in the private service sector, mainly in marketing, transport, finance, telecommunication and tourism, is also sparse. One source mentioned that approximately 8,700 people work in the tourism industry in Niger (High Investment Council Niger, 2017, p.15). From Allen et al. (2018) and Antil (2014) it could be suggested that the private service sector activities are linked to agri-food, cotton and extractive industries.

7. Drivers for more formal and productive jobs

Employment creation in the formal economy has not kept pace in the Sahel, like in many other sub-Saharan African countries. Even under the most favourable projections, only about a quarter of the people newly entering the labour force will find wage employment in the formal economy (Fox, 2014). Agriculture and the informal economy (most of which has important forward and backward linkages with agriculture) will need to absorb a large share of these new workers into remunerative work otherwise the region will experience escalating economic, social and political challenges associated with youth unemployment.

Creating productive jobs in the formal sector can be done with two strategies (Rodrik, 2015):²⁵

- Helping small businesses grow, via commercialisation pathways out of the informal sector.
- Supporting modern companies in formal sector to expand and be more inclusive.

No literature was found on the specific drivers for job creation in the Sahel. The drivers behind job creation that could contribute to both these strategies' success and mentioned below, were derived from many other resources in development economics. Drivers that will be examined in more details are trade openness (for the Sahel in particular for regional trade as landlocked countries), investments (private and public investments), value chain or cluster development for (future) competitive sectors, green economy (in particular in renewable energy), education and innovation, entrepreneurship, remittances from migrants, and urbanisation (higher domestic demand within a small economy as the Sahel). These drivers need good governance, good (investment) management skills in public and private sector, and human security, stability and conflict prevention. Some limitations for these drivers with evidence from Sub-Saharan Africa has been included, although not always specified for the Sahel due to lack of evidence from the G5 Sahel countries.

Trade openness

For developing countries the export market is the main source of industrial growth, which generates higher productivity and jobs in the formal sector. However, manufactured exports measured per capita in the Sahel countries is far below the average for low income countries. To increase manufacturing exports, the countries must open their trade and improve their trans-border infrastructure. Regional trade in particular provides possibilities to create jobs by reaching into markets with higher demand than in the small Sahel countries. Not only with other West-African countries, like with Nigeria (for Niger), Ivory Coast (for Mali), Ghana (for Burkina Faso), but also by looking at the Maghreb. One of the most developed trans-border trade is the livestock

²⁵ See also <https://www.project-syndicate.org/commentary/poor-economies-growing-without-industrializing-by-dani-rodrik-2017-10?barrier=accesspaylog>

and meat industry between countries, for example, between Niger and Nigeria and Mali and Ghana. However, as Laurent Bossard, director of the Sahel and West-Africa Club (SWAC) secretariat, explains in an interview with *The Broker*: “The meat industry, for example, could be a starting point for removing trade barriers between Sahelian and Maghreb countries. Mali is a land of cattle, while Algeria is short on cattle.”²⁶ The current problem, according to Bossard, is that trade in cattle is restricted and only processed meat can cross the border to Algeria. To turn this problem in an opportunity creates jobs in meat processing, storage and transport.

One study shows the importance of social networks to succeed in trans-border businesses as it shows that the overall economic performance of small traders is not affected by their education, though, greatly affected by the size and the nature of their network (Kuepie et al., 2014). Being in active relationship with one additional prominent figure increases profits by 50%. While social ties with local religious leaders have a negative effect on the business profit, relationship with civil servants, politicians, and, security officers, is translated into economic performance (Kuepie et al., 2014). Social connections developed with state representatives had a much greater effect on economic performances of the poorer countries, like Niger (Kuepie et al., 2014). Traders show a great ability to invest in commercial networks and routes, concludes also Walther et al. (2015). Drawing upon kinship, ethnic and religious ties, their embedded business networks still help to reduce business risks, pool complementary skills, improve access to new markets and safeguard property rights. In an uncertain environment such as the Sahel, traders tend to avoid large fixed investments and prefer spreading their business over different places, often by maintaining an extensive network of kin or clients in different cities (Walther, 2014). Mobile traders in much of contemporary West Africa concentrate on mastering the distance between places rather than investing heavily into territories of production organised around a central place (Walther et al., 2015).

The literature also makes a link between food security and regional trade in West-Africa (Lange et al., 2016; World Bank, 2015). The reasoning is that if West-Africa's total and urban population will continue to grow, and if global competition for food available on the world market will become tenser, regions like West Africa (including G5 Sahel) should put emphasis on feeding the own population as much as possible (Lange et al., 2016). Regional food trade could create jobs in regional food systems in input markets, food markets, financial markets and food production (Roquefeuil et al., 2014; Arawomo & Badejo, 2015, World Bank, 2015a).

Women represent nearly 60% of informal traders in the region (Koroma et al., 2017, p.XI). “It is mainly practiced by the unemployed, small and medium enterprises and some large firms, and even formal worker desiring to supplement their salaries. As such, there is considerable overlap between informality and formality given the linkages between the two and the fact that there are formal firms which engage in informal trade and there are informal traders who are suppliers of the formal firms” (Koroma et al., 2017, p.XI). Koroma et al., hence, conclude that trans-border trade presents unique benefits to those engaging in such activities, like employment creation. A substantial proportion of informal cross-border trade is related to staple food commodities (e.g. maize, rice and cattle) and low-quality consumer goods (e.g. clothes, shoes and electronic appliances) (OECD, 2009). Yusuff (2015), for example, specifically investigates women traders engaging in informal trade in order to make a living from their very small, informal enterprises. Along the trade corridor informal trade of products but also services (like people in low-skill

²⁶ See: <http://www.thebrokeronline.eu/Blogs/Sahel-Watch-a-living-analysis-of-the-conflict-in-Mali/Sahel-Remove-barriers-and-create-a-common-ground>

border-related services such as taxis and portage, travel worker) takes place, posing threats to those engaged in it, but also brings possibilities of income-generation (Yusuff, 2015).

Improving formal cross-border trade in the region and formalising informal trade (see for interventions on formalising trade in Africa, Koroma et al., 2017) are the main steps forward mentioned in literature (Lange et al., 2016). Poor infrastructure, inefficient customs and other issues hamper trade flows within the region, despite the positive impact of proximity of countries. The costs of trade clearly seem to be a significant obstacle not only for integration or rather participating in global trade but also for integration within the ECOWAS region (Lange et al., 2016). Trade facilitation measures could particularly target the aspects which cause the higher trade costs in the ECOWAS region, which includes the G5 Sahel). “The lack of implementation impinges on the creation of an economic union and has, amongst other factors, encouraged informal trade and smuggling, both of which benefit from different prices and business costs across borders” (Lange et al., 2016). Making regional agreements transparent for businesses, not only the modern sectors, but also the SMEs, and focussing more on the principle of mutual recognition instead of the current principle of harmonisation in order to align regulations in the West-African region are mentioned in the literature.

Value chain and industrial cluster development

In the literature there is a consensus that production, manufacturing and service industries should cluster together, as clusters they generate more productivity gains and job creation, by attracting new industry into a sparse industrial landscape, like the Sahel countries. For foreign investors, no single firm has the incentive to locate in a new area in the absence of others. Governments can foster industrial clusters by concentrating quality institutions, social services, and infrastructure in special areas. Mali, Burkina Faso and Ivory Coast all launched a common special economic zone to boost foreign investment.²⁷ Linking such zones to local supply chains is important to create added value and jobs. The agri-food industry and cotton industry in the Sahel both have the potential to do this (Allen et al., 2018).

Value chain development, open markets and trade could increase productivity that could create more and productive jobs in the sector. Such industrial clusters and value chains (e.g. livestock, cotton, fish, rice, maize, vegetables) rely on effective linkages with a modern service sector (for legal protection, quality control, knowledge and capital). In the case of cotton, Burkina Faso, Mali and Chad only have very basic cotton processing, like ginning the cotton and exporting cotton fiber and cotton lint (USDA GAIN, 2018). Any investment in manufacturing and processing goes to these activities that therefore rely on less added value jobs than textile manufacturing and spinning. Creating an industrial cluster that add more value, needs to be competitive in the international market and relies on public and private investment in infrastructure and capacity building. The theory is that manufacturing is historically the ideal way to increase productivity levels and achieve growth (Bhorat et al., 2016). For example, productivity increases, together with the mass absorption of many unskilled workers, help the transition from farming to other more diverse and productive job opportunities, while still linking with commercialised small and medium size producers for inclusive value chains. Furthermore, as manufacturing products are tradable at global level, the sector can grow without domestic demand.

²⁷ See: <https://en.portal.santandertrade.com/establish-overseas/mali/investing-3>

However, Rodrik (2015) shows that by looking at the bigger picture the benefits for African countries to turn to industrialisation, and manufacturing in particular, are diminishing.²⁸ This applies to both the employment and output shares of manufacturing in GDP, showing that in general developing countries are now benefiting less from output and labour absorption in the manufacturing sector than some decades ago. Furthermore, manufacturing work needs more skills due to new technologies and demand structures in international supply chains, which makes it more difficult for countries in the Sahel to reduce the skills gap. As a consequence, the majority of the labour force – even if they have worked in the formal sector before – could in the future find jobs in the informal sector, with low productivity levels and which are non-tradable. If labour moves from high productivity to low productivity, as Rodrik (2015) predicts, this will result in higher inequality and will leave islands of modern activity in developing countries, with a far less optimistic outlook for the economy as a whole. One solution that governments are looking for is focusing on opportunities for service sector development that could link with industrial clusters. High productivity and tradable services, like finance and insurance, only attract high-skilled workers and could not be the labour absorbing machine that manufacturing was. Furthermore, the bulk of the service sector is low productivity and non-tradable work, like cleaning and security services. It generates jobs, but they are not economic growth poles and therefore, is falling short as an alternative motor for economic transformation (Rodrik, 2015).

This complexity around the creation of industrial clusters within value chains, which should absorb workers from the agricultural sector and informal sector in cities, shows the importance of innovative inclusive business models and enabling capabilities as the building blocks for future economic growth (Bhorat et al., 2016). Until now, inclusive business models tend to be far from collaborating with informal economic systems and actors in search for mutual benefit, corporate businesses that target the poor tend to treat informal economies as a pool of workers and organisational resources to be tapped for the benefit of corporate actors (Meagher, 2018). Fressoli et al. (2014, p. 278) point out, “inclusion is not an unproblematic, smooth endeavour; rather, in practice it can also involve uneven, unequal, incomplete and sometimes antagonistic processes and outcomes”. Strategies of formal business actors are mainly ignoring the wider informal ecosystem, making it less clear that they improve economic opportunities for informal workers, entrepreneurs and consumers (Meagher, 2018).

Green economy

One of the opportunities that could become the driver for non-traditional job creation in the Sahel countries is the green economy. Mainly in renewable energy sources, in particular solar energy. Burkina Faso opened the biggest solar installation in West Africa in 2017 (funded via EUR 25 million in donations from the EU and a loan of EUR 22.5 million from the French development agency).²⁹ The 55-hectare plant on the outskirts of the capital Ouagadougou has a capacity of 33 megawatts, annually 56 gigawatts - equivalent to 5% of current total energy production. The electricity goes into the network of national power firm Sonabel. There are plans to increase the capacity to 50MW and two other solar energy plants are being built in other parts of the country. However, just 20% of the overall population is hooked up to the grid.³⁰ Many people use wood or butane gas bottles. The solar energy cost 45 CFA francs (EUR 0.07) per kilowatt-hour, a third of

²⁸ See also Bhorat and Steenkamp (2018) blog: <https://www.brookings.edu/blog/africa-in-focus/2018/02/05/foresight-africa-viewpoint-manufacturing-complexity-in-africa/>

²⁹ See (28 November 2017): <https://www.news24.com/Africa/News/burkina-faso-launches-sahel-regions-largest-solar-power-plant-20171128>

³⁰ Idem (28 November 2017)

the 145 CFA francs per kilowatt-hour it costs to produce electricity at fossil-fuel plants, according to Sonabel. Burkina Faso hopes to meet 30% of its electricity needs from photovoltaic solar panels by 2030, and hopes to become self-sufficient in electricity production (it imports electricity from Ghana and Ivory Coast). In June 2015, Mali signed an agreement with Eranove, and African company, to finance and develop a hydroelectric dam along with the International Finance Corporation (IFC, private arm of the World Bank). However, the latter withdrew its participation, bringing the project to a halt for the moment.³¹

The direct employment generation is small, as the technology is imported and, in case of Burkina Faso, built by French companies. However, big solar installations are not the only way to deliver renewable energy to the population. A new industry of mini-solar systems for poor households can create more direct jobs, plus, more importantly, generates spill-overs to give communities more productive opportunities where they are not connected to the grid. Evidence from literature shows that grid-based electrification is only an attractive option in densely populated areas, with an expected high demand for electricity, and/or within reasonable distance of existing high voltage power lines.³² Opening the market for solar panels is a way of creating new job opportunities and improve livelihoods, in particular in remote areas; e.g. giving households access to ICTs and more productive hours (Harrison et al., 2016; UNEP, 2014). Stand-alone pico-solar lights put off-grid populations on the first step of the energy ladder, while making significant savings on kerosene, dry-cell batteries and candle costs and improving lumen/hour light quality. Solar Home Systems (SHS) are more expensive, but with pay-as-you-go models proving successful in parts of Africa for the poorest households the technology is affordable up to around US\$150 for a three years pay period. Thus, innovative business models can be seen in several parts in sub-Saharan Africa, with impact on job opportunities.³³

For the Sahel, no studies could be found for the off-grid solar solutions, however, from other literature it shows that up to 15,000 new jobs have been created in the wider economy in sub-Saharan Africa as a result of the transition to efficient off-grid lighting (UNEP, 2014, p.3). Renewable and efficient energy create many times more jobs than non-renewable energy systems do, particularly for non-oil producing countries. In Bangladesh alone, the Africa Progress Panel (2015) found that 10 years ago there were an estimated 25,000 small solar systems in the country. There are now 3.5 million and it is estimated that the boom has created around 114,000 jobs in solar panel assembly. A related issue is the traditional role of the kerosene vendor. Rather than trying to put them out of business, it should be preferred to involve them in the business of selling modern lighting systems (IEA, 2013, p.13). The combination of more and better light, access to ICTs and awareness of solar technology increases opportunities of marketing new services and technologies to off-grid populations. Entrepreneurs enter the market with special applications for mobile phones, SMS-services and solar enabled technologies (e.g. solar PV irrigation pumps, solar PV cool storage, solar PV food dryers), with the potential to increase economic development and output (IRENA, 2016, p. 61).

³¹ See Santander: <https://en.portal.santandertrade.com/establish-overseas/mali/investing-3>

³² See K4D Helpdesk report: Quak, E. (2018) Lighting and Electricity Services for Off-Grid Populations in sub-Saharan Africa. K4D Helpdesk Report no. 317. Brighton, UK: Institute of Development Studies. <http://opendocs.ids.ac.uk/opendocs/handle/123456789/13649>

³³ Idem: Quak, 2018.

Linking entrepreneurship, innovation and skills to markets

An USAID (2017) Sahel Youth Analysis with lessons learned from some youth (employment) programmes in Burkina Faso and Niger, shows that there is an opportunity to improve skills of youth to increase economic competitiveness. Low skill attainment and literacy, currently stifle job growth. Nigerien youth prioritise socioeconomic growth and opportunity, but lack network support, demand-driven, quality training and in some cases literacy/math skills. The study (USAID, 2017) identified key barriers to livelihoods diversification efforts: insufficient literacy, education, training, and access to credit, skills, and networks to productively engage in micro- or small enterprises outside of traditional farming and livestock activities. There is a need for increased training and support for aspiring entrepreneurs, including improving access to credit, apprenticeships, and information to expand opportunities. Many youths in the USAID programme dropped out of trainings in Burkina to pursue informal work at mining sites or because they did not think they would find employment after trainings. There is also a feeling that most opportunities are clustered in the regional capital: “meaningful training opportunities in the more rural/satellite towns may offer opportunities where employment services support could make a clear difference” (USAID, 2017, p.5). More entrepreneurial youth reported not being able to meet the collateral requirements to obtain a loan, even from NGOs, which intend to target their demographic; youth relied instead on community loan groups or family and friends to lend them small amounts of cash when needed, enabling them to keep small business activities going, but not to expand (USAID, 2017).

Firm and entrepreneurial capabilities is the know-how and working practices used in production and largely determine quality and productivity. For better and formal job creation, the Sahel countries need higher capability firms and enterprises. Value-chain relationships between different firms need to be promoted and need specific skills for entrepreneurs and employees. Education as an important solution in keeping up with changing economic and technological developments, for productivity growth, and in closing the skills gap and allowing more people to find suitable jobs (Bhorat et al, 2016).

Better entrepreneurship skills can increase productivity and upscaling of small enterprises, also with a better chance of growing out of informal sector. In literature and in development programmes there is a growing attention to entrepreneurship as an opportunity for poverty alleviation and in particular job creation for the unemployed youth in sub-Saharan Africa.³⁴ Entrepreneurship is the engine of economic growth and it has a catalytic agent for expansion and promotion of productive activities in every sphere of the economy. Also, playing a crucial role in increasing the competition of emerging sectors, new small businesses are critical to economic growth and innovative capacity (Omoruyi et al., 2017). Entrepreneurship boosts economic growth by introducing innovative technologies, products, and services. Increased competition from entrepreneurs’ challenges existing firms to become more competitive (Omoruyi et al., 2017). On the overall impact of entrepreneurship programmes, see some recent K4D reports.³⁵ Africa

³⁴ See for example the African Entrepreneurship Policy Forum https://unctad.org/meetings/en/SessionalDocuments/diaeeepf2017d01_report_en.pdf

³⁵ See two reports of Ismael, Z. (2018): Indicators and Methods for Assessing Entrepreneurship Training Programmes <https://opendocs.ids.ac.uk/opendocs/handle/123456789/13788>; and: The Impact of Entrepreneurship Training Programmes <http://opendocs.ids.ac.uk/opendocs/handle/123456789/13781>

Economic Outlook 2017 shows that about 22% of Africa's working-age population is starting a new business. Meanwhile, about 44% of African entrepreneurs start businesses to utilize the chances in the market, although about 33% adopt this as a means of surviving because of the level of unemployment in Africa (Omoruyi et al., 2017).

However, some literature also shows that too much emphasis on entrepreneurship, innovation and employability as driver for youth employment is misleading, in particular as vehicle of getting entrepreneurs out of the informal sector. Meagher (2018) for example, shows that these policy perspectives are out of line as much of Africa has been saturated by decades of economic hardship and declining access to land, especially among youth. Meagher identifies four mechanisms of adverse incorporation operating within the idea of frugal innovation and inclusive business models to get enterprises out of informal or semi-informal constructions:

- **Copying:** The strategy of copying from the informal economy is widely encouraged by BoP initiatives, with particular reference to micro-packaging, 'leveraging' local knowledge and identifying market opportunities. These practices are more delicately referred to as 'adapting products and processes' by the UNDP (2008, p. 18) report 'Creating Value for All'.
- **Free-riding:** Also referred to as 'leveraging soft networks', or 'leveraging the strengths of the poor', the idea is to reduce costs by free-riding on informal community or economic networks and institutions downward flow of benefits that is often checked by the use of formal contracts, bureaucratic complexities and other forms of corporate discipline to 'align incentives' and protect corporate profits. For example, a high turnover of sales agents in BoP distributive networks indicates that benefits are often slow to trickle down.
- **Bypassing nodes of accumulation:** This means the sidelining of informal manufacturers and de-legitimation of informal commercial intermediaries, including informal wholesalers, brokers and money-lenders, who may absorb a higher share of profits into the informal economy. BoP strategies call for the replacement of informal intermediaries by NGOs or social enterprises to facilitate access to these otherwise difficult to reach markets. This serves to restructure value chains away from informal nodes of accumulation which redistribute profits into informal economic systems. NGOs are regarded as 'honest brokers' who facilitate economic inclusion of the poorest, while the informal commercial intermediaries are censured for 'monopolistic behaviour' (Dolan & Rajak, 2016).
- **Shifting risk and costs:** In addition to free-riding on informal marketing networks, BoP distribution channels that use micro-credit-based payment solutions and micro-franchising arrangements force informal entrepreneurs to absorb marketing costs, turnover risks and interest payments within their very low margins. A number of studies have detailed how BoP programmes such as Care International's Rural Sales Programme, Grameen 'Phone Ladies', and Avon in South Africa and Brazil transfers risk onto poor women by requiring them to buy equipment or goods up front on credit, leaving them to cope with increasingly saturated markets, falling returns and in some cases the social opprobrium of transgressing cultural boundaries (Dolan & Roll, 2013). Delayed payment and financial pressures within low-income communities place increasing strains on social networks, eroding rather than strengthening local social capital.

Investments

Public investment is critical to support the delivery of key public services and catalyse economic growth and poverty reduction (IMF, 2018, 2017, 2016). For instance, public investment in social infrastructure is essential to improve the access to education, to invest in skills gap, while investments in economic infrastructure (e.g., roads and electricity) should help expand integrate and expand economic sectors and favour the generation of private sector employment. However, beyond its level, the efficiency of public investment is crucial. From a theoretical perspective, the arguments in favour of scaling up public investment in countries like Chad, Niger, Mali, Burkina Faso and Mauritania include the existence of relatively elevated rates of return due to lack of productive capital, a higher potential growth due to the removal of bottlenecks to development, and the complementarities between public and private capital (IMF, 2016). Improvements in public investment management (PIM) are key to enhance the efficiency and productivity of public investment.

Mali - In recent years, the Government of Mali has put in place FDI promotion policies aimed at encouraging competitiveness and private sector participation in almost all sectors. FDI flows are weak and unstable, due to insecurity and lack of stability. They decreased by 25% in 2017 to reach US\$266 million (UNCTAD, 2018). The stock of FDI is growing year by year and is close to US\$4 billion in 2017 (27.8% of the country's GDP). State authority in parts of the North is still tenuous, and corruption remains a problem throughout the government, public procurement, and both public and private contracting, where demands for bribes are frequently reported. Labour regulations, although not fully enforced, are relatively rigid. Therefore, Mali ranked 143rd out of 190 countries in the *Doing Business* report 2018 published by the World Bank, falling two positions compared to the previous year.³⁶

Mali is looking for investors in the energy sector, to increase electricity and in June 2017, BWSC has been awarded a US\$100 million contract to build a high-efficiency power plant which will increase the power capacity in the country by 25%. Mali is also seeking to privatise its banking sector. Many Malian companies have established joint ventures with foreign enterprises in the mining sector. The main sectors that attract foreign investors are the exploitation of gold and oil and the textile industry. Mali's leading investors are France, China, Thailand and South Africa. Morocco has also been a significant investor (banking and telecommunications) since 2010.³⁷

Foreign investments play an important part in the Sahel economy and finances. In particular in extractive industries and for infrastructure construction, the countries depend on foreign investments. The IMF (2018) shows for Mali that gold exports are dominated by multinationals, accounted for over 80% of total exports. Although foreign investors are diversifying their investments in other economic sectors, such as oil, construction, telecommunication and financial services, gold's share in total exports of goods has consistently exceeded 50% since the early 2000s, and was 62% and 67% in 2015 and 2016, respectively (IMF, 2018). However, the percentage in tax revenue for mining sector in Mali is smaller with 12% and in GDP 6% (IMF, 2016). Multinationals (mainly mining and telecommunication operators) generate over 50% of the total turnover of corporations subject to corporate income tax, and slightly over 80% of taxable profits (IMF, 2018). There is indication that profit shifting by foreign investors in Mali erodes its

³⁶ World Bank (2018). *Doing Business in Mali*.

<http://documents.worldbank.org/curated/en/627541510049941217/pdf/120984-WP-PUBLIC-DB18-MLI.pdf>

³⁷ Source: Santander Trade Portal. <https://en.portal.santandertrade.com/establish-overseas/mali/investing-3>

revenue base, due to the importance of low-tax jurisdictions as origin of FDI into Mali, insufficient guidance on transfer pricing and absence of effective thin capitalization rules, and the fragmentation of Mali's tax policy framework in various legislations - which increases the risk of incoherent policy making and tax enforcement. On the positive side, Mali's limited network of tax treaties has withholding tax rates close to domestic rates on dividends, interest, and royalties (IMF, 2018).

In 2017, the IMF and the government of Mali undertook an assessment of trends in infrastructure quality. This assessment evaluated institutional quality of infrastructure management using PIMA framework. The PIMA pictured robust Mali, institutional arrangements for public investment management compared with peer countries. This Mali PIM system has, however, not been able to deliver durable and quality infrastructure. The existing infrastructure is declining. The stock of fixed capital represented approximately 110% of GDP in 2000 and less than 70% of GDP in 2015 as infrastructure building did not keep up with economic growth (IMF, 2018). The fixed capital stock per capita declined by approximately 17 percent between 2000 and 2015 (in constant U.S. dollars, subject to purchasing power adjustment, per capita). As a result, the stock of fixed capital per capita is now much lower than in other WAEMU countries (IMF, 2018). This substantial erosion in public assets can be explained by difficult geopolitical, climate, and environmental conditions and insufficient efforts to maintain and renew the country's existing infrastructures.

As a result, in 2015 Mali was left with one of the poorest capital stock per capita ratio in the western Africa sub region. While the overall level of public expenditure to GDP remains below the Sub-Saharan Africa average, current spending has risen rapidly over the past five years (IMF, 2018). The overall level of public expenditure places Mali in the slightly-lower spender category. However, over the past decade, expenditure have grown faster than in the Sub-Saharan Africa average especially regarding current expenditures. Meeting the developmental needs of a growing population requires boosting the efficiency of public spending. Looking at health, education and infrastructure spending and their outcomes shows that Mali has space to improve the quality and effectiveness of its expenditures (IMF, 2018).

Burkina Faso – Burkina Faso encourages FDI and offers tax and legal benefits, such as the possibility for a foreign company to own 100% of shares in a local company. However, investments in sectors as mining, telecommunications, financial services and electricity are subject to regulations.³⁸ Significant reforms are being undertaken to facilitate investors into the country. Burkina Faso is eligible for the Millennium Challenge Account subsidy (funded by the U.S. Government), which could increase investments in the country's human capital. However, FDI influx is still weak, but increasing (US\$390 million in 2016 and US\$486 million in 2017) according to the UNCTAD World Investment Report 2018.

Burkina Faso has been revising its mining code since 2015 and is now planning to introduce an oil code as the government is interested in exploring three areas that could be potentially suitable for oil extraction. The country is looking for a new partner that would take over extraction activities in the Tambao deposit (worth US\$1 billion, currently the largest in the world), which should bring in significant foreign investment.³⁹ Since 2013, Burkina Faso has published its data on the revenues from the mining sector, thus increasing transparency in an effort to improve the business climate. The latter nonetheless remains poor, the country ranking 148th in the 2018

³⁸ Source: Santander Trade Portal <https://en.portal.santandertrade.com/establish-overseas/burkina-faso/investing-3>

³⁹ Idem: Santander Trade Portal.

Doing Business Report published by the World Bank, two spots lower compared to 2017.⁴⁰ While improving access to credit information, the country needs to work on access to electricity, protecting minority investors, resolving insolvency issues and strengthening contracts. The main investing countries are Lebanon and France (70% of FDI).⁴¹

Addressing the country's infrastructure gap is critical to maintaining the growth momentum. In this context, the country's accelerated growth strategy envisaged doubling the public investment budget to US\$2.2 billion over a five-year period (Kabedi-Mbuyi et al., 2016). At the same time, reconciling the necessary financing for the urgent infrastructure needs with debt sustainability is challenging, especially in light of the country's high vulnerability to terms-of-trade shocks. The Poverty Reduction Strategy Paper for 2011–15, titled SCADD (*Stratégie de Croissance Accélérée et de Développement Durable*), sought to achieve strong and sustained economic growth while strengthening progress toward poverty reduction. Macroeconomic policies and reforms under the SCADD supported economic diversification, enhanced absorptive capacity for public investment, increased investment in infrastructure, and an improved business environment. In particular, the SCADD emphasised increasing public investment to support private sector-led growth and closing the country's infrastructure gap. The implementation of the strategy was estimated to cost about US\$15 billion for 2011–15, including a doubling of the public investment budget to reach US\$2.2 billion in 2015 (Kabedi-Mbuyi et al., 2016).

Chad – In 2017, FDI inflows into Chad are estimated at US\$335 million, with a total stock at US\$5.4 billion (UNCTAD 2018). The investments are primarily directed toward the oil industry. In the World Bank's Doing Business 2018 report, Chad is one of the last countries in the ranking, 180th out of 190 countries.⁴² The procedures for starting a business and paying taxes are the most burdensome. In addition, insecurity, political instability and poor infrastructure, as well as a limited domestic market and a shortage of skilled labour remain major obstacles to investment. Protection of private property is inadequate, and fraud is common in property transactions. The majority of FDI goes toward oil exploration and infrastructure development. The services sector has lately attracted foreign investment too, mostly through telecommunications and banking sectors. The country's main investors are Nigeria, France, the United Kingdom and South Korea.⁴³

For decades, investment in Chad remained at very low levels. Between 1960 and 2000, public investment flows never exceeded 1.5% of GDP, averaging only 1.2% per year. At the same time, private investment flows were also weak, at 2.8% of GDP per year on average (IMF, 2016). Investment in Chad took off in the early 2000s, in the wake of the development of the oil sector. After the start of oil production by mid-2003, private investment flows, largely linked to the oil sector, remained at 8% of GDP per year on average, i.e., three times more than the annual average level before Chad's oil era. The oil sector generated over US\$10 billion in public revenues for Chad between 2000 and 2013. Consequently, public investment flows increased significantly and reached, on average, 9% of non-oil GDP between 2000 and 2013. Despite significantly higher flows since 2001 (and without taking into account the recent recession in oil sector in Chad), the investment stock remains low in comparison with other African LIDCs. Chad

⁴⁰ World Bank (2018). Doing Business in Burkina Faso.

<http://documents.worldbank.org/curated/en/618741509607914341/pdf/120832-WP-PUBLIC-DC18-BFA.pdf>

⁴¹ Santander Trade Portal (see also 36)

⁴² World Bank (2018). Doing Business in Chad.

<http://documents.worldbank.org/curated/en/921441509621259219/pdf/WP-PUBLIC-DC18-TCD.pdf>

⁴³ Source: Santander Trade Portal <https://en.portal.santandertrade.com/establish-overseas/chad/investing-3>

is part of a handful of countries in Africa that have seen a significant increase in their public investment stocks between 2005 and 2013 (however as shown above, with a sharp decline in 2016-2017 due to lower oil prices). As a result, the country closed some of the gap in terms of investment levels, with a stock reaching 100% of GDP (of which 30% of GDP in public investment) in 2013 (IMF, 2016). Despite this substantial increase in less than one decade, Chad remains the African country with the lowest capital stock measured in percent of GDP. That said, this increase would appear more significant if the ratio was calculated as a percentage of non-oil GDP (IMF, 2016).

The infrastructure gap has decreased in recent years, but Chad still suffers many deficiencies in this area. On the eve of the oil era, Chad's infrastructure was exceptionally poor, even by the standards of other African LIDCs. Less than 10% of 6,200 kilometres of roads were paved in 2000, and access to power, electricity, telecommunications, water, and health services were highly underdeveloped (IMF, 2016). Significant progress has been made since then, as reflected by several existing indicators (IMF, 2016):

- The World Economic Forum's Global Competitiveness Index (GCI) shows that the perception of the quality of overall infrastructure in Chad increased, on a scale of 1 to 7 (best) from 1.55 in 2007 to 2.43 in 2016. However, progress has been widespread amongst LIDCs, and the perception of the quality of infrastructure in Chad remains significantly lower than in Sub-Saharan African countries on average. Finally, on the access to telecommunications, while progress has been significant (for instance, mobile phones subscriptions per 100 habitants reached almost 40 in 2016, compared to only 1.4 in 2007), this level remains more than two times lower than the average for Sub-Saharan African countries.
- In the same vein, the infrastructure pillar of the Logistics Performance Index developed by the World Bank shows Chad's overall ranking moving up from 141st in 2007 to 112th in 2014. This index is more favourable to Chad than the GCI, since it shows that Chad is now slightly above the average of Sub-Saharan African countries in terms of infrastructure, which can be explained by the focus on trade logistics' infrastructure (like roads).

While the PIMA methodology has not yet been fully applied to Chad, general results for LIDCs suggest weaknesses in terms of public investment efficiency in Chad. For instance, the 2011 Public Investment Management Index (PIMI) showed that Chad is among the worst performers among 71 countries (40 low-income and 31 middle-income countries), in particular regarding the strategic guidance and project appraisal, the project selection and budgeting, and the evaluation and audit of projects (IMF, 2016).

Niger - FDI flows to Niger accounted for US\$3.5 billion in 2017, a decrease from US\$4.45 billion in 2016. Since uranium mining represent a large part of FDI, the drop in uranium prices affected inflows.⁴⁴ FDI stock grew to US\$6.37 billion in 2017 (UNCTAD 2018). The mining and oil sectors attract the most FDI. France, China, Japan, Sweden and the United States are the country's leading investors.⁴⁵ Niger ranked 144th out of 190 countries in the World Bank Doing Business ranking 2018.⁴⁶ This highlights the significant progress made in the areas of business creation,

⁴⁴ Source: Santander Trade Portal. <https://en.portal.santandertrade.com/establish-overseas/niger/investing-3>

⁴⁵ Idem: Santander Trade Portal.

⁴⁶ World Bank (2018). Doing Business in Niger.

<http://www.worldbank.org/content/dam/doingBusiness/country/n/niger/NER.pdf>

cross-border trade and the protection of minority investors, among others. Niger's business climate has nonetheless improved thanks to the adoption of a new investment code, a reduction in the minimum capital required to start a new business, faster access to water and an improved system for information about access to credit. Additionally, Niger offers incentives to investors regarding infrastructure development.

In 2017 the World Bank approved a US\$50 million IDA grant for Niger to support reforms in public investment and public finance management, and the operationalisation of the regulatory frameworks necessary for well-functioning public irrigation and electricity sectors.⁴⁷ According to the IMF, Niger's public finance management systems have improved over the past years but remain weak, which undermines public service delivery. More effective public investment management will help use efficiently public resources, particularly in a context of fiscal consolidation. The grant will finance the second Public Investment Reform Support Credit (PIRSC 2). The PIRSC series is designed to support and address challenges in the implementation of the Nigerien Government's national poverty reduction strategy, the Economic and Social Development Plan (*Plan de Développement Economique et Social – PDES*). As part of the PDES objectives, the development of irrigation through the 3N (*Nigeriens Nourish Nigeriens*) strategy aims to reduce the risks of volatility related to rain-fed agriculture. Similarly, the development of the electricity sector has significant poverty reduction and growth dividends in a country where less than 10% of the population has access to electricity. Increasing the efficiency of public spending and ensuring high return of public investment is therefore key, and requires undertaking a vast public finance management and public investment management reform agenda.⁴⁸

Mauritania - Mauritania promotes its strategic geographical location to attract new investors. In February 2016, the World Bank granted US\$10million in aid to the country to support the development of the Nouadhibou duty-free zone, which aims to attract foreign investors.⁴⁹ FDI inflows reached US\$330 million in 2017 according to the World Investment Report published by UNCTAD, with a 21% increase compared to 2016. Estimated at US\$7 billion, the total stock of FDI represents 139.8% of the country's GDP. The majority of the investments has targeted the sectors of oil exploration and exploitation, mineral mining of iron ore and gold, telecommunications with the acquisition of mobile phone licenses and the construction sector. China has been showing a steadily increasing interest in Mauritania, and its traditional trading partners, including its European partners (primarily Hungary and France), seem likely to pursue their investment projects in the country (infrastructure and telecommunications).⁵⁰ Mauritania is making steady progresses in matter of business climate. It gained eight places in last year ranking of the World Bank and won 10 more places in 2018, reaching the 150th place out of 190 economies (2018 Doing Business).⁵¹

The World Bank published recently a study (2018 – French) that analyses the country's economic outlook through the lens of public investment and expenditure on social protection. It concludes that although massive investments in infrastructure projects - such as the construction

⁴⁷ See World Bank press release 28 February 2017: <http://www.worldbank.org/en/news/press-release/2017/02/28/niger-world-bank-approves-50-million-to-improve-public-financial-and-investment-management-systems>

⁴⁸ Idem: World Bank press release 28 February 2017

⁴⁹ Source: Santander Trade Portal. <https://en.portal.santandertrade.com/establish-overseas/mauritania/investing>

⁵⁰ Idem: Santander Trade Portal.

⁵¹ World Bank (2018). Doing Business in Mauritania.

<http://documents.worldbank.org/curated/en/211781510050178387/pdf/WP-PUBLIC-DB18-MRT.pdf>

of thousands of kilometres of paved roads, the electrification of the country, and the provision of potable water - have helped expand the population's access to basic services (while increasing the government deficit), protecting the most vulnerable populations from the impact of budget restrictions aimed at containing public debt remains a priority (World Bank, 2018). Yet, the share of public investment allocated to human development grew from 4.7% of total public investment in 2010 to over 10% in 2015, then fell again to 2.7% in 2016. Although the Mauritanian authorities maintained a prudent fiscal stance in 2017 by broadening the tax base and implementing expenditure controls, the report nonetheless emphasises the need to establish a more effective public investment management system, prioritising projects that combine economic performance and social impact (World Bank, 2018).

8. Opportunities and challenges

Opportunities

Urbanisation - Urbanisation and rising incomes are driving major transformations, in particular in the food economy. Households increasingly rely on markets and look for foods that are more diverse and convenient to buy, prepare and consume. This transformation in local diets cuts across all countries and income groups and involves a move towards increased consumption of higher-value perishable and processed products (Staatz & Hollinger, 2016; Allen and Heinrigs, 2016). The changes in what people consume and how they access food are also driving demand for new and greater activities along food value chains, the majority of which are in the off-farm segments of the food economy. The Sahel countries are among the least urbanised countries in the world, however, urbanisation is taking place gradually, shaping a gradual transformation of the food economy, with the opportunity to create jobs in urban and peri-urban areas related to food systems.

Remittances - Remittances to Sahel countries have increased significantly and are expected to rise further. In literature remittances are linked to economic activities in the countries, giving opportunities for productive investment for small businesses (Fransen et al., 2016). The data for the Sahel shows the regional link, with most remittances going to neighbouring countries, which is good for building social networks that could drive further regional openness and trade. However, data also shows the differences between countries. Burkina Faso received US\$406 million in 2016 (3.6% of GDP) – mainly from Ghana, but also from European countries as Italy and France. Remittances were also sent to family in the region, mainly to Ivory Coast, Ghana, Mali and Nigeria.⁵² In Mali US\$937 million remittances were received in 2016 (6.7% of GDP) – mainly from France, but also from Nigeria and Gabon. The amount that was sent abroad is much lower and went mainly to Burkina Faso, France, Senegal and Nigeria.⁵³ In Niger remittances were US\$182 million (2.4% of GDP) – mainly from Nigeria and Benin. Niger is one of the countries that send out more remittances US\$395 million in 2016, mainly to Nigeria.⁵⁴ For Chad and Mauritania no data exist for the received remittances. For Chad the remittances sent out of the country have dropped significantly with the recession in the country (in 2012 US\$1.4 billion – nearly 12% of GDP - to US\$217 million in 2016). Money goes to Nigeria, suggesting the oil employment link between the two countries. In Mauritania remittances sent out of the country have increased significantly over the years to US\$223 million in 2016 (4.7% of GDP) - mainly to

⁵² Data retrieved from Country Economy website: <https://countryeconomy.com/demography/migration/remittance>

⁵³ Idem: Country Economy

⁵⁴ Idem: Country Economy

Senegal and Mali. This suggests indeed the increasing amount of migrant workers in the country as was expressed earlier in the report.⁵⁵

Advancements in food system thinking - Successful development of the untapped employment and production potential in the food economy requires an essential understanding of the food system, including local and spatial contexts. Well-rounded jobs strategies, in particular for youth and women, need to integrate a systems approach that captures the links between agricultural productivity, off-farm employment and rural and urban areas. In the Sahel, promoting non-agricultural employment will depend on supporting private enterprises, in particular SMEs, to drive growth and job creation (Allen et al., 2018). Policies aimed at supporting value chain development, integrated skills development and systems as well as improving the overall business climate are important elements in the jobs agenda. In addition, off-farm activities and the food economy in general, play a particularly important role in women's employment. 68% of all employed women in West Africa work in the food economy (Allen et al., 2018). Women dominate employment in off-farm segments including food-away-from-home, food processing and food marketing. Yet women rarely have access to the resources needed to develop their activities in relation to their potential and ambitions, in particular in the Sahel G5 (Allen et al., 2018). Policies and investments promoting off-farm food economy activities will have a particularly large impact on women. The employment opportunities in food value chains, including in farming, require skill sets that are rapidly evolving. Anticipating and supporting these educational requirements are of major importance to the jobs agenda. Equipping youth, and in particular young women, with the necessary skills and education and reducing barriers to productive resources, will significantly promote employment potential and diversification. For example, diagnostic for Mali by the World Bank (2015) suggests the following priorities: liberalisation of the cotton sector, increasing support for agricultural R&D, increasing land cultivation of semi-arid agriculture in southern Mali, increasing production of export competitive fruits (mango, papaya) and vegetables (shallot/onion, potato), improving management practices of land and water, addressing governance issues at the Office du Niger, reforming fertilizer subsidies, and improving infrastructure for pastoralists.

The Sahel is a case of living perpetually with risk, thus more emphasis on long-term structural solutions is required to improve the resilience of the agricultural sector. Designing and implementing a comprehensive agricultural risk management strategy will require sustained and substantial financial investments, shifting the focus from short-term crisis response to long-term risk management, streamlining disparate donor investments and isolated interventions toward the core problem, supporting decentralised community and farm level decision making, integrating agricultural risk management into the existing development frameworks, prioritising agricultural risks into government and donor strategies, and focusing on implementation (World Bank).⁵⁶ A landscape approach describes interventions at spatial scales that attempt to optimise the spatial relations and interactions among a range of land cover types, institutions, and human activities in an area of interest.⁵⁷

Spending productively public revenues from extractive sector – Another opportunity is to use the revenues from the extractive industry for investments in job creation. Although the sector

⁵⁵ Idem: Country Economy

⁵⁶ See report World Bank: Transforming Agriculture in the Sahel.

<http://www.worldbank.org/content/dam/Worldbank/document/Africa/transforming-agriculture-in-the-sahel-background-note-english.pdf>

⁵⁷ Idem World Bank.

does not generate many direct jobs to absorb the low-skilled workers into productive jobs in the formal mining, oil and gas sectors, with good public investment management policies and taxation policies that are related to attract foreign investors (mainly in extractive industries, but also in other sectors as finance, telecommunication, construction and tourism), public revenues can increase significantly and be used for productive investments and job creation (Daniel et al., 2016; Chuhan-Pole, 2017).⁵⁸

Main challenges

Demography - A young population in the Sahel presents the opportunity for the countries to benefit from a potentially large 'growth' dividend (IMF, 2015). According to UN population projections, the Sahel countries could undergo a demographic transition over the next few decades, characterised by declines in infant mortality and fertility rates, with a resulting increase in the share of the working-age population relative to the overall population. This demographic transition would be characterised by a higher share of the population that is potentially economically productive and can create income, boost fiscal revenues and ease the burden of fiscal expenditure on services such as healthcare and education. The potential impact on growth from these effects could be important. A paper of Drummond et al (2014) estimated that a 1% increase in the working age population increases real GDP growth per capita by 0.5%. However, the demographic growth dividend remains negligible if fertility rates decline only modestly or if the labour market is unable to absorb the new workers in productive activities, like in the Sahel (IMF, 2016). The increase in the share of working-age population may not yield growth benefits as evidence from Fox et al. (2013) suggests that there are speed limits with which the manufacturing and service sectors can absorb new workers, with any excess labour force to seek informal employment in urban areas or in subsistence agriculture.

Security: A large amount of recent literature on the Sahel countries is about the insecurity in the countries. With insecurity increasing in Mali, Burkina Faso, Niger and Chad. The region is prone to human insecurity, instability and faces a high level of refugees. For example, in Chad the recent budgetary problems have been compounded by the tense security situation, particularly in the Lake Chad basin. Chadian security forces had to be deployed across the country to undertake regional peace-keeping efforts, the costs of which put pressure on the national budget. The severe drought, and the resulting food insecurity also added to the country's problems. The humanitarian crisis in the region has also had a spillover effect on Chad, which hosts a large number of refugees and displaced persons (IMF, 2018). The security relates to youth unemployment, food insecurity, high levels of smuggling (goods, arms, drugs and migrants to Europe). More information can be read about the multiple levels of human insecurity in the region in Sahel Watch (living analysis) provided by The Broker.⁵⁹

Skills gap – Creating jobs in the Sahel needs fast investment in human capital to ensure better skills for productive jobs. Employability is key, however, training, education, re-education and capacity development for example to increase entrepreneurship skills can only succeed when integrated within the broader picture of the labour market. Not only has the incidence of informality tended to increase significantly at lower educational levels; but, over the past three

⁵⁸ See for example IMF paper on Mali Technical Assistance Report for Mining Taxation Modeling <https://www.imf.org/en/Publications/CR/Issues/2016/12/31/Mali-Technical-Assistance-Report-Mining-Taxation-Modeling-of-Five-Mining-Operations-43797>

⁵⁹

decades, there has been an observed significant increase for those with lower skills to be more involved in the informal trade despite relatively high economic growth that African region has experienced in the past decade, which, theoretically speaking, should have created more jobs in the formal sector and provide opportunities to absorb even the semi-skilled labourers during the period (Koroma et al., 2017). This period also corresponds with the global economy experiencing increased trade liberalisation; high foreign direct investments inflows especially to developing countries; and increased expansion in global value chain development. One of the conclusions is that the skill-biased nature of international trade is at the heart of some of the observed linkages between trade liberalisation and increased informality among low-skilled populations (Goldberg & Pavcnik (2007). Opportunities for wage employment are limited. Few people are employed in the formal sector. Therefore, if the skill gap remains, casual labour opportunities on farm or in off-farm enterprises, by contrast, are much more likely to emerge.

9. Appendix: Donor interventions related to job creation

Burkina Faso:

World Bank	Bagre Growth Pole Project	<p>The project contributes to increased economic activity, resulting in an increase in private investment, employment generation, and agricultural production. In 2018, the project received an additional financing that covers costs of electricity, roads, and the diagnostics for an industrial park for agricultural transformation in the project area, which have not been completed under the existing credit because of cost overruns for the construction of irrigation canals. The additional finance also allows for scaling up existing activities such as establishing effective investment promotion systems, improving the investment climate, providing additional support to value chains in the project area, and land tenure pilots. The extended closure date is November 2020.</p> <p>http://projects.worldbank.org/P161234?lang=en</p>
World Bank	Livestock Sector Development Support Project	<p>The development objective of Livestock Sector Development Support Project for Burkina Faso are to enhance productivity and commercialization of non-pastoral animal production in selected chains, and strengthen the country's capacity to respond to severe crises affecting the livestock sector, and to provide immediate and effective response in the event of an Eligible Crisis or Emergency. This project has three components. 1) The first component, Improved access to livestock services and inputs, aims to enhance livestock productivity in selected value chains through improved access of producers to animal health services and inputs, and institutional strengthening of MRAH's operational capacity to efficiently carry out its core responsibilities. It comprises three sub-components: (i) Improving livestock producers' access to animal health services; (ii) Improving livestock producers' access to quality inputs to raise better livestock and (iii) Institutional strengthening. 2) The second component, Livestock Value Chains Development, aims to</p>

		<p>strengthen the efficiency and competitiveness of selected livestock value chains (beef, small ruminants, milk, poultry and pig, as well as honey and aquaculture) to enhance production and meet the demand of national and regional markets while generating higher incomes for value chains actors and creating employment opportunities. The project ends in July 2022.</p> <p>http://projects.worldbank.org/P159476?lang=en</p>
World Bank	Transport Sector Modernization and Corridor Trade Facilitation Project	<p>The project aims to improve the efficiency and safety of transport services on the Burkinabé section of the Ouagadougou (Burkina Faso) – Abidjan (Côte d'Ivoire) - road transport corridor. The first component, Institutional strengthening and capacity building support for public and private sector participants in the transport sector, will strengthen the capacity of the Government of Burkina Faso and of professional associations/organisations in the transport and trade sectors to provide more efficient services to the private sector operating on the Burkinabé section of the Corridor. It has the following subcomponents: (i) Strengthen the institutional capacity of the Ministry of Transport, Urban Mobility and Road Safety (MITMUSR) and related agencies; (ii) Support to transport operators and stakeholders; and (iii) Support to joint initiatives and coordination to facilitate trade on the Corridor. The second component, Development of a heavy cargo truck renewal scheme, is designed to support the development of a self-sustaining long haul heavy cargo truck renewal scheme. It has the following subcomponents: (i) Technical assistance required to put in place an operational framework for a truck fleet renewal program as well as for the recovery and recycling of decommissioned trucks; (ii) Support the establishment of a truck renewal scheme to facilitate the replacement of old unsafe trucks with new ones; and (iii) Support operation of technical committee for the implementation of the financial mechanism and for management of old unsafe trucks scrapping scheme. The third component, Support to customs modernisation and trade facilitation on the Burkinabé section of the Corridor, aims to strengthen transport, trade and transit facilitation along the Burkinabé section of the Corridor. This project ends in June 2021.</p> <p>http://projects.worldbank.org/P156892?lang=en</p>
World Bank	Youth Employment and Skills Development Project	<p>The project's objective is to increase access to temporary employment and skills development opportunities for out-of- school youth. The project has three components. The first component is labour intensive public works. The short-term objective of this component will be to provide immediate employment for youth with no or little education through Labour Intensive Public Works (LIPW). It will promote the participation of women by selecting activities that are supportive of women employment and reserving a percentage of the LIPW jobs specifically for women. This component will also (with third component) support the mainstreaming of LIPWs into national</p>

		<p>policies, strategies and procedures and the establishment of a permanent capacity for LIPWs in the country. The second component is skills development. This component aims to improve youth employability by offering youth with different skills levels within their first training experience. This component has following three sub-components: (1) development of initial vocational training through a dual training approach for economic sectors (sub-component 2-1 A) and establishment of a demand driven training system and provision of training (sub-component 2-1 B); (2) apprenticeship program; and (3) entrepreneurship training and provision of follow up support to entrepreneurs. The third component is institutional capacity strengthening and project management. The purpose of this component is to: (a) strengthen the capacity of private and public sector institutions to engage in an informed policy dialogue on skills and employment on a regular basis, e.g. through technical capacity strengthening and the creation of a mechanism for consultations and collaboration; and (b) improve the knowledge base on employment and youth. This project ends in December 2018.</p> <p>http://projects.worldbank.org/P130735/bf-youth-employment-skills-development?lang=en</p>
FAO	Country Programming Framework	<p>The Country Programming Framework (CPF) 2017-2020 shapes FAO assistance in Burkina Faso. The CPF is centred on the following three priority areas: Strengthening food security and nutrition and people's resilience to climate change Increasing rural communities' incomes through sustainable and efficient agricultural production systems Improving governance of the rural sector Jointly prepared with the Government and other development partners, the CPF reflects relevant priorities in key national development policies, including the National Economic and Social Development Plan (PNDES) and the National Programme for the Rural Sector (PNSR). Fully aligned with the UN Development Assistance Framework for Burkina Faso, the CPF also contributes to FAO's Strategic Objectives.</p>
ILO	Strengthening Labour Governance in MSMEs and Supporting the Transition from the Informal to the Formal Economy in Africa	<p>The project aims at supporting Micro, Small and Medium Enterprises (MSMEs), including in the informal economy, to prevent occupational risks, improve working conditions, and promote respect for Fundamental Principles and Rights at Work (FPRW). The project runs between January 2016 and December 2019. MSMEs lack visibility, labour inspection visits and appropriate follow up is very limited. Thus, the project aims at supporting MSMEs, including in the informal economy, to prevent occupational risks, improve working conditions, and promote respect for Fundamental Principles and Rights at Work (FPRW). In order to achieve its goal, the project implements a twofold strategy: i) it supports national labour inspectorates to better ensure compliance; ii) it increases the capacities of Governments, of employers, workers and their representatives, as well as those of Governments and other public</p>

		<p>Institutions (such as National school of Administration and Judicial Institutes) to promote and implement FPRW and Occupational Safety and Health (OSH) issues regulations on the ground. Burkina Faso is one of 5 African countries involved in this project.</p> <p>https://www.ilo.org/addisababa/technical-cooperation/WCMS_537813/lang--en/index.htm</p>
IFAD	Rural Development: Agricultural Value Chains Promotion Project	<p>This project, funded by OPEC Fund for International Development, runs until 2023. It works on structural transformation of the national economy through sustainable and inclusive growth underpinned largely by a modernised agriculture sector. By developing four agricultural value chains – rice, vegetables, sesame and cowpea – the project contributes to achieving this objective. In particular, the project will improve smallholder farmers' productivity, add value to agricultural products and promote entrepreneurship to overcome slow growth in rural areas. The project will focus on the regions of Boucle du Mouhoun, Cascades and Hauts-Bassins where it will build on and scale up the gains made by previous programmes. The project will target 57,000 households, of which 27,500 households will receive production support, 27,000 will be assisted in setting up or consolidating rural microenterprises and 2,500 will be supported in value chain development. Of the target groups, the project will endeavour to reach a minimum of 50 per cent of women and 30 per cent of young people in all interventions.</p> <p>https://www.ifad.org/web/operations/project/id/2000001063/country/burkina_faso</p>
International Trade Centre (ITC)	Job creation in fashion and design sectors (Mali and Burkina Faso)	<p>The European Union and the International Trade Center (ITC) have launched a €10 million project to support job creation in the fashion and design sectors in Burkina Faso and Mali. Funded by the EU Emergency Trust Fund for Africa, the project targets young people and women, and on vocational training and the creation of small and microenterprises. The project, implemented by ITC through its Ethical Fashion Initiative, will support the development of the textile and crafts sectors, including taking advantage of the unique Bogolan, Basilan and Indigo dyeing and printing techniques. By developing local capacities, the initiative will promote the sustainable export of this cultural wealth to international markets. The project aims to create up to 5,000 direct and 6,000 indirect jobs in the coming four years in Burkina Faso and Mali. notably through vocational training, support for social enterprises that respect fair labour standards and ensuring added value in handicraft sector. Increased value-added cotton processing will generate employment opportunities for women and young people from marginalized communities while offering an attractive end product for the international fashion and design markets.</p>

		http://www.intracen.org/news/Job-creation-for-youth-in-Burkina-Faso-and-Mali/
Chad:		
World Bank	First Economic Recovery and Resilience Development Policy Operation Project	<p>The development objectives of First Economic Recovery and Resilience Development Policy Operation Project for Chad and pillars are to (1) enhance fiscal risk management; (2) improve oil revenue transparency and management; (3) promote resilience and economic diversification in key real sectors; and (4) increase social protection for the poor and vulnerable. The series has been designed to leverage and complement ongoing and planned World Bank projects and Technical Assistance (TA) activities across the four pillars, in the areas of resources mobilization and State-owned Enterprise (SOE) management, agriculture, and social protection. This programmatic series will also help catalyze private investment through improving the investment climate and creating opportunities in key sectors of the economy. With the support of this operation, the government intends to promote the transparency and effectiveness of its fiscal policy through the establishment of a functional oil revenue management mechanism. The project ends in June 2020.</p> <p>http://projects.worldbank.org/P163424?lang=en</p>
World Bank	Value Chain Support Project	<p>The development objective is to improve: (i) targeted aspects of the business environment; and (ii) the performance of agro-pastoral value chains in the Republic of Chad. The project is composed of three components. The first component, improving the business environment aims to the Chad government's efforts to improve the business environment. It comprises of following two sub-components: (i) support with formulating and implementing business environment reforms; and (ii) improve trade logistics procedures. The second component, support to the meat and dairy value chains aims to strengthen the meat and dairy value chains by carrying out a program of activities aimed at improving meat and milk facilities, assisting the recipient in enhancing the meat industry to meet regionally accepted certification standards. It is composed of following two sub-components: (i) upgrade existing infrastructure and facilities; and (ii) support to business development in the meat and dairy value chains. The third component, project management aims to build the capacity of national institutions, especially the coordination unit that will be responsible for project management and monitoring and evaluation. The project runs until September 2019.</p> <p>http://projects.worldbank.org/P133021?lang=en</p>

FAO	Country Programming Framework	<p>FAO's assistance in Chad is defined by the Country Programming Framework (CPF) 2017-2021, which is aligned with the Organization's technical and policy expertise and the Government's priorities, as reflected in the National Development Plan (2017-2021), whose objective is to achieve the National Agenda – "2030 vision, the Chad we want". The vision includes an ambitious National Investment Plan for the Rural Sector based on the Comprehensive Africa Agriculture Development Programme (CAADP). The CPF focuses on three priority areas: The development of sustainable agricultural value chains addressing the challenge of sustainable food production in the sectors of crops, livestock, and forestry. The formulation and implementation of policies and sectoral strategies for food security and nutrition. The sustainable management and use of natural resources to build community, institutional and household resilience.</p>
Swiss Contact	Vocational Training Programme	<p>The objective of the project is to promote employability, employment – and above all – self-employment among the many young boys and girls who are excluded from the formal technical education and vocational training system, by developing both their technical and business management skills, all while assisting them in their transition into professional life. With a programme duration planned for 12 years, the significant changes expected are as follows. 1. Improvement in the quality of life of young beneficiaries – especially young women and marginalised minorities (e.g. internally displaced persons, refugees, the unemployed, and the handicapped) in the PAFPT15 area of coverage. This will be reflected in: (i) decent and sustainable employment or self-employment, (ii) better competitiveness on the market thanks to the improvement in services and/or products supplied, (iii) increased incomes and improved food security. 2. Structural impact on the work environment for young people living in urban and rural areas – through improved training and support services that will help them find better and higher-paying jobs closer to home; these programmes and services will be managed in partnership with local actors (local authorities, regional/local technical services, and private sector representatives). 3. Impact on policy and subsector strategy for the formal technical education and vocational training system. This will include a professional training component adapted to regional and local contexts. It will feature diversified curricula geared toward local socio-economic demand and will promote self-employment. This projects ends in 2021.</p> <p>https://www.swisscontact.org/nc/en/projects-and-countries/search-projects/project-finder/project/-/show/vocational-training-support-programme-in-chad-formi.html</p>

France Development Agency AFD	Financing Mechanism for Continuous Vocational Training and Apprenticeship.	<p>Matching training to employment is central to AFD's operations, which support the financing mechanism for continuous vocational training and apprenticeship. 7,000 employees have already been trained in craft, construction and livestock raising activities. AFD also gives special attention to the socioeconomic integration of young Chadians. With the Bab al Amal project, 3,000 young people will be helped to find employment between 2018 and 2021. We are also supporting the Small Business Centre, a unique system to support entrepreneurship in Chad, which works on self-employment: at the end of 2017, over a thousand promoters had already been trained and over two hundred business plans had been finalised.</p> <p>https://www.afd.fr/en/page-region-pays/chad</p>
Mali:		
World Bank	Poverty Reduction and Inclusive Growth Support Operation	<p>The operation is designed to support the implementation of the Growth and Poverty Reduction Strategy Paper for the period 2016-2018, known as the 'Cadre Stratégique pour la Relance Economique et le Développement Durable du Mali' (Strategic Cadre for Economic Recovery and Durable Development - CREDD). The CREDD, the 2015 Systematic Country Diagnostic (SCD) and the FY16-19 Country Partnership Framework (CPF) for Mali are all closely aligned. The PRIGSO operations support the policies defined in the CREDD by fostering inclusive growth and supporting pro-poor (decentralized) transfers and social protection. This is the second operation of a series comprising two single tranche operations. The first credit (p157900) in the amount of US\$50 million was approved in May 2017. Previous development policy operation (DPO) series supported efforts to address the twin challenges of fiscal consolidation while also tackling governance problems by focusing on strengthening Public Financial Management (PFM) and Governance. Reforms supported in the past included efforts to improve budget transparency, strengthen fiduciary and establishment of controls, and improve public investment management, as well as actions to reduce opportunities for corruption, accelerate public procurement and build local government financial management capacity. The present series, by contrast, aims to sustain the foundations for inclusive economic growth, decentralization and protection of the most vulnerable. The dialogue on PFM reforms is mainly driven by the International Monetary Fund (IMF). The project ends in June 2019.</p> <p>http://projects.worldbank.org/P161619?lang=en</p>
World Bank	Skills Development and	The project's objective is to support education and training for employability and private-sector led job opportunities for youth in the

	Youth Employment Project	<p>Republic of Mali. The project will be divided into three components: (1) Education and Training for Employability; (2) Private-Sector led Jobs Creation for Youth; and (3) Institutional Strengthening and Project Management. Project's sub-components under Component 1 are: (2.1) Supporting Entrepreneurship for Youth; and (2.2) Supporting Established Small and Medium Enterprises for Job Creation. The project runs until June 2020.</p> <p>http://projects.worldbank.org/P145861?lang=en</p>
World Bank	Livestock Sector Development Support Project	<p>The development objective is to enhance productivity and commercialization of non-pastoral animal production in selected value chains, and strengthen the country's capacity to respond to an eligible crisis or emergency. This project has three components. 1) The first component, Strengthening of Livestock Services, aims to enhance livestock productivity in selected non-pastoral value chains. It has the following subcomponents: (i) Animal health and food safety; (ii) Productivity enhancement; and (iii) Policy design and regulatory framework. 2) The second component, Support to Private Investment, aims to strengthen the competitiveness of targeted livestock Value chains (VCs) cattle and small ruminants (meat and dairy), poultry (eggs and chickens), and fish farming (aquaculture) by supporting partnerships between VC actors and facilitating their access to markets. It has the following subcomponents: (i) Economic organization and incentive framework; (ii) Support to investment cycle; and (iii) Investment financing. 3) The third component, Crisis Prevention and Management, and Project Coordination, aims not only to develop mechanisms for preventing and responding to severe crises and emergencies in the livestock sector, but also to strengthen project coordination capacities within Ministry of Livestock and Fisheries (MEP). It has the following subcomponents: (i) Crisis prevention and management; and (ii) Institutional support and project coordination. The project runs until June 2014.</p> <p>http://projects.worldbank.org/P160641?lang=en</p>
World Bank	Segou Solar Independent Power Producer Project	<p>The objective is to promote the introduction of grid-connected renewable energy in Mali through an independent power producer. Mali is currently recovering from a complex crisis, which affected the country on three fronts: conflict and insecurity in the north, institutional and political turmoil in the south, and humanitarian and food insecurity across the country due to the 2011 drought. In early 2012, the vast northern regions fell under the control of extremist forces, while a coup in Bamako threw the country into political instability and turmoil. By 2014, economic growth had reached pre-crisis levels, indicating that the economy was catching up and recovering from the crisis. In 2012, the gross domestic product (GDP) growth dropped to -0.8 percent because of the combined effects of a deteriorating business climate and a drop in official development assistance. With the progressive consolidation of political stability and</p>

		<p>improved security conditions in 2013, growth resumed at 2.3 percent and accelerated to 7 percent in 2014 its highest level since 2003 (when it was 7.6 percent). Economic recovery continued in 2015 with a 6 percent growth rate. Mali's current macroeconomic outlook is positive, provided the security situation does not deteriorate and favorable climatic conditions continue to prevail. Growth is projected to be around 5 percent annually over the next two years, with a projected decline to 4.7 percent in 2019. During this important political period, the World Bank Group has a critical role to play to de-risk private sector investments in the country and, in turn, support economic growth, employment generation, and service delivery in the short to medium term. The project ends in June 2019.</p> <p>http://projects.worldbank.org/P148355?lang=en</p>
World Bank	Support to Agro-Industrial Competitiveness Project	<p>The aim of this project is to increase the processing of agricultural products for targeted value chains in the selected geographic area. The Project will support the Government of Mali agropoles strategy through the following components. 1) Expand mango processing and investment opportunities will aim at increasing mango production, processing and export, through the following two sub components: (a) promote mango processing and exports; and (b) strengthen institutional capacities at API-Mali; 2) Improve access to mango production areas will finance two types of infrastructure that are physical inputs to the mango value chain: (a) the rehabilitation of 300 km of rural roads and (b) the construction and modernization of seven post-harvest facilities including collection and conditioning centres. The objective of this component is to improve the uninterrupted and timely supply of agricultural products, mostly mangos, by facilitating physical access to production sites, collection, and conditioning of products in the Sikasso region. 3) Foster animal feed production will assist animal feed industries in increasing quantity and quality of production by securing stable quality inputs (including cereals and oilseeds). Thus, this component will ensure that enough animal feed is produced at low cost to catalyze the growth of meat under modern conditions. The project ends in July 2022.</p> <p>http://projects.worldbank.org/P151449?lang=en</p>
FAO	Youth Employment Programme	<p>The programme aims to generate job opportunities to strengthen resilience of rural young populations. The FAO works with the Ministry of Agriculture to implement Youth at Work: Reducing Rural Poverty, a programme which aims at generating attractive and decent job opportunities for rural youth with a specific attention to girls and young women, a key contribution to strengthening resilience for food security and nutrition and reducing rural poverty in Mali. The project ended in 2017.</p>

		http://www.fao.org/3/a-i6981e.pdf
FAO	Country Programming Framework	<p>FAO assistance in Mali is shaped by the 2013-2017 FAO Country Programming Framework (CPF), which centres on three priority areas: Support to agricultural production, competitiveness and food security, with a focus on the intensification and diversification of production and increased opportunities for income-generation in the private sector. Increased productivity is to be achieved by adopting a value chain approach based on improved technologies, institutions and policies, from the supply of inputs to agribusiness and agro-processing support. Priority will be given to security of tenure for smallholders. Sustainable natural resource management and environmental improvement, with a focus on mechanisms for climate change mitigation and adaptation as well as resilience and restoration of natural resources. Activities will include obsolete pesticide management and sustainable development and protection of local livestock breeds and production systems. Disaster risk reduction and management, and strengthened resilience of vulnerable population groups affected by food and nutrition crises and conflict, including rebuilding destroyed production capacity and infrastructure, and helping crisis-affected populations to resume agricultural production and marketing. This priority area includes building up both food and feed stocks, particularly cereal banks, and strengthening resilience and capacities of producers as well as institutions.</p> <p>http://www.fao.org/countryprofiles/index/en/?iso3=MLI</p>
IFAD	Rural Youth Vocational Training Employment and Entrepreneur-ship Support	<p>This project covers the entire country, adopting a phased approach so that the project strategy can be tested in the Koulikoro and Sikasso regions and later expanded. It runs until 2021 and gives priority to young people – particularly young women – who lack technical skills and access to financing for income-generating activities. By supporting vocational training and microenterprise development, the project aims to facilitate rural young people's access to employment opportunities and attractive, well-paying jobs in agriculture and related enterprises. As a result, they will become actors in modern agricultural value chains that are responsive to market demand and resilient to climate change. The specific objectives of the project include: Improving regional training mechanisms in response to demand from young people, based on the labour market and potential job prospects; Promoting economic initiatives by rural young people in agricultural value chains and related economic activities, to enable them to gain sustainable access to vocational employment. Producer organizations were closely involved in project formulation, will be represented as stakeholders on the</p>

		<p>project steering committee and will take part in project supervision. In addition, they will be tasked with various facilitation and training activities.</p> <p>https://www.ifad.org/web/operations/project/id/1661/country/mali</p>
Danida	The Program for Support to Economic Growth and Promotion of Employment stimulated by the Private Sector (PACEPEP)	<p>This programme runs until 2018. It aims to increase rural incomes and employment as well as enhance the competitiveness of economies in the areas targeted by the programme. In order to achieve the expected results, the PACEPEP has been divided into three (3) components, the component 1 is now supported by the National Council of Employers of Mali (CNPM) with the support of the Danish Technical Assistance Office NIRAS. PACEPEP's intervention strategy is aimed at developing the private sector and improving the structuring of targeted sectors. It wants to promote a better public-private dialogue and between private actors themselves as well as an improvement of the business environment. Contribute to the development of companies by facilitating their financing. Strengthen the development of value chains. To achieve these immediate objectives, the component aims to support: SMEs; integrative projects; Research & Development projects; green projects.</p> <p>http://openaid.um.dk/en/projects/dk-1-220569</p>
European Union	Youth Employment Creates Opportunities at Home (YEAH)	<p>The project contributes to the self-employment and employment of young people (especially women and disadvantaged groups) in the horticulture, waste management, agri-food and handicrafts sectors. It also promotes the development of SMEs to contribute to the employment in the same sectors, while also contributing to the creation of a financial and educational environment conducive to youth employment. The project runs until June 2021.</p> <p>https://ec.europa.eu/europeaid/projects/youth-employment-creates-opportunities-home-mali-yeah_en</p>

Mauritania:

World Bank	Nouadhibou Eco-Seafood Cluster Project	<p>The objective is to support the development of a seafood cluster in Nouadhibou that promotes sustainable management of fisheries and generates value for the communities. The project comprises of two components. The first component, developing a sustainable seafood cluster in Nouadhibou will build the capacity of Nouadhibou Free Zone Authority (ANZF) and of stakeholders to plan, design, reorganize, and promote the cluster so that the objective of the sustainable management of fisheries resources is well integrated in the development of competitive seafood value chains that originate in Nouadhibou. It consists of two sub-components: (i) promoting public-</p>
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		<p>private dialogue (PPD) in order to develop a vision for a sustainable seafood cluster in Nouadhibou and accelerate nationwide reforms of structures impeding its development; and (ii) generating responsible investments in the Nouadhibou seafood cluster. The second component, increasing the value of seafood products produced and marketed in the seafood cluster with the participation of local actors aims at increasing the value of seafood products produced and marketed in the seafood cluster and increasing the participation of the local population in the cluster's activities. It consists of two sub-components: (i) improving the handling of landed catch and promoting the export of fresh fish at the Nouadhibou seafood cluster; and (ii) building local suppliers' and vulnerable groups' capacities to capture greater benefits from productive and inclusive seafood value chains. The project ends in June 2020.</p> <p>http://projects.worldbank.org/P151058?lang=en</p>
World Bank	Supporting Gas Project Negotiations and Enhancing Institutional Capacity	<p>To support the government capacity to drive negotiation towards final investment decision, and lay the foundations for the gas sector's contribution to the economy through enhanced legal and regulatory frameworks and capacity building. There are three components to the project, the first component being capacity building and technical support for the GTA negotiations. The activities undertaken under Component A are designed to enable the GoM to develop the institutional capacities and to acquire the third-party expertise needed to negotiate effectively a FID on the GTA. This capacity building and technical support will enable the Government to ratify the technical, legal, fiscal, commercial and financial agreements underpinning the FID. These capacities and expertise will also be applicable for gas prospects that could be identified and appraised during the life of the project. The second component is the strengthening of the institutional and regulatory framework. The objective of this component is to assist the GoM in updating its policy and strategy for the development of the gas sector. Finally, the third component is the project management and coordination. The component will provide targeted support to the project management and coordination in the amount of US\$1 million, which will be used to finance the core project execution team and operating costs that are essential for effective project implementation. This will include financing the costs associated with the recruitment of a procurement specialist, an accountant, an administrative and financial officer, as needed to build the MPEM's procurement, financial management, M&E capacities in a sustainable manner. The project ends in September 2022.</p> <p>http://projects.worldbank.org/P163563?lang=en</p>
FAO	Country Programming Framework	<p>FAO assistance in Mauritania is shaped by the four-year 2017-2021 FAO Country Programming Framework (CPF), which focuses on four priority areas: Supporting inclusive and sustainable agricultural, livestock and fisheries production to create employment and</p>

		strengthen the technical and operational capacities of rural people. Promoting an enabling institutional environment for achieving food security and nutrition through the diversification of food systems and the development of a nutrition-sensitive agricultural policy. Ensuring the sustainable management of natural resources for a sustainable and resilient economy in the face of climate change, in particular through capacity building for local communities and the effective management of ecosystems.
FAO	Small Pelagic Fish Production	Mauritania Ministry of Fisheries and Maritime Economy and FAO are working jointly to promote small pelagic fish production through the introduction of conservation techniques and the development of a test programme for improving processed products. The project was carried out in collaboration with the NGO "Muftah EL Khair". Results achieved included: the use of conservation techniques for fish species such as machoiron, captain, sardinella and mullet; training for members of the NGO and other associated cooperatives on conservation techniques, including salting, drying, smoking and braising; the distribution and trading of processed fish in disadvantaged neighbourhoods of Nouakchott and; the development of a new technology for fish conservation. The project was part of a capacity building process for small-scale fishing stakeholders and the sustainable management of pelagic fisheries resources.
ILO	Promoting Sustainable Enterprises	<p>Project in cooperation with the European Commission. The aim is to promote sustainable employment and entrepreneurship development in key growth sectors. The project ends in October 2021.</p> <p>https://www.ilo.org/gateway/faces/home/projects/projectdetails?locale=EN&projectsymbol=MRT%2F16%2F02%2FEUR&cid=MRT&_adf.ctrl-state=altz4g70i_153</p>
ILO	Improving the employability of young people and the capabilities of SMEs through the development of the construction subsector	The project runs until February 2020 and aims for more and better jobs for young people through development of the building and civil engineering sub-sector in local materials and professional training in building construction sites (known as PECOBAT). The project is funded by the European Union as the first action of the Emergency Trust Fund of the European Union for the Sahel and Lake Chad region of Mauritania. The aim of this joint work is to address the root causes of migration by ensuring access to employment for young people by creating better economic opportunities in Mauritania's migration basins. The project plans through a pilot action on two target regions in the south of the country, the creation of sustainable and quality employment in the sector of earth construction. The ILO facilitates the activation of this employment niche, encouraging key alliances between Mauritanian public authorities, the private sector and workers. It aims to promote employment as a rural and green development strategy through the participation of civil society actors and other actors at local level. Job opportunities for young men and

		<p>women are created on the basis of decentralised infrastructure works.</p> <p>https://www.ilo.org/addisababa/technical-cooperation/rbsa/WCMS_541255</p>
IFAD	Inclusive Value Chain Development Project	<p>A total of 285,600 farmers, particularly women and young people, in six regions of southern Mauritania will benefit from a project designed to improve food security and nutrition, increase the incomes of rural poor households, create jobs and reduce the country's dependence on food imports. The Inclusive Value Chain Development Project (PRODEFI) builds upon IFAD's experience in the country and elsewhere in the region by adopting a poverty reduction approach based on supporting production and processing to respond to market demand. The first phase of the project will focus on horticulture, poultry farming, goat milk and non-timber forest products. Inland fishing will be tested around Lake Fom Gleita. Following market studies, new income-generating crops or activities will be defined for the second phase of the eight-year project. The farmers will receive training and advisory services to improve their production models and adapt them to climate change. In that regard, the project will facilitate, through an Adaptation for Smallholder Agriculture Programme (ASAP) grant, the use of solar energy -- from production to storage and processing – and promote sustainable management techniques for natural resources such as water, pasturelands and seeds. In addition, to better match supply and demand, PRODEFI will develop an inclusive approach, promoting public-private-producers partnerships (4Ps) in the interest of smallholder farmers and facilitating their access to markets, which proved to be a very powerful pathway to reduce poverty in the previous IFAD supported project, Value Chains Development Programme for Poverty Reduction. The project runs until 2024.</p> <p>https://www.ifad.org/web/operations/project/id/2000001071/country/m Mauritania</p>
German Federal Ministry for Economic Cooperation and Development	Promotion of Employment and Occupational Integration in Rural Areas	<p>The aim of the project, which runs until 2021, is to improve the employment situation of young people in selected regions of Mauritania and the rural structures for promoting employment are in place. The project covers two components of the EU's Institutional Strengthening Programme for Agricultural and Pastoral Resilience in Mauritania. The project territory is in Southern Mauretania and comprises the region along the banks of the Senegal River, as well as the regions Assaba and Guidimaka. The project operates in the following fields of activity: 1. Local business development: helping rural areas develop the capacity to quickly create employment. 2. Labour market interventions: supporting the integration of young people in the economy and employment. 3. Vocational training: developing the planning and implementation capacities for short-term training programmes of</p>

		<p>government and private actors. Promoting the vocational education and training of professionals to meet public and private sector labour demand in agroforestry and livestock farming.</p> <p>https://www.giz.de/en/worldwide/62597.html</p>
Niger:		
World Bank	Youth Employment and Productive Inclusion Project	<p>The objective of Your Employment and Productive Inclusion Project for Niger is to expand income-generating activities for youths in selected poor areas. The project has three components. 1. Youth productive inclusion in rural areas component will deliver an integrated package of cross-cutting support services to address the main constraints that are preventing youths, and young women in particular, from engaging in more productive employment in rural areas. 2. Youth insertion in selected activities in semi-urban areas component will facilitate insertion in selected activities for youths living in semi-urban areas. In each participating commune with semi-urban areas. The component will identify a few income-generating activities and trades that have the potential to be economically viable, have growth potential and can generate positive spillover effect on the local economy. The objective is to foster the development of off-farm micro-enterprises by youths, but also unlock the potential for more efficient markets and better employment around the selected areas. The component will finance integrated support to facilitate youth insertion in these activities, including short-term technical training, life skills and entrepreneurship training, as well as start-up support including capital. 3. Institutional support and project management component will support the extension of employment support services to the commune level, coordination in the employment sector, and project management, including fiduciary matters, communication, planning, data collection, monitoring and evaluation activities under the project as well as a steering committee to oversee project implementation. The project runs till June 2023.</p> <p>http://projects.worldbank.org/P163157?lang=en</p>
World Bank	Fostering Rural Growth Reform Development Policy Financing	<p>The development objective of Fostering Rural Growth Reform Development Policy Financing (DPF) Project for Niger is to foster rural growth. It has two pillars: 1) Increasing rural productivity growth; and 2) Supporting growth enabling sectors. This document requires a DPF in the form of an IDA Grant and an IDA Credit. This is the first Of a programmatic series Of two single-tranche development policy operations. It is a single-tranche disbursement of 50 percent in the form of an International Development IDA regular credit terms with maturity of 38 years including a grace period of 6 years. The program supports the Government of Niger's growth and poverty reduction strategy through its emphasis on reforms for fostering rural growth</p>

		<p>reform. It builds on the World Bank Systematic Country Diagnostic (SCD, August, 2017) and the incoming new Country Partnership Framework (CPF, 2018-2020). The project ends in December 2018.</p> <p>http://projects.worldbank.org/P163318?lang=en</p>
World Bank	Skills Development for Growth Project	<p>The objective is to improve the effectiveness of formal technical and vocational training, short-term skills development, and apprenticeship programs in priority sectors. In 2018, additional financing was permitted for scaling up of successful activities supported under the original project and support new activities that will enhance the achievement of the project objective. Furthermore, the additional financing will support institutional reforms of the technical and vocational education and training (TVET) sector, thus contributing to the achievement of the human capital objectives of the Government's new Economic and Social Development Plan. The additional financing also will introduce new activities to (a) expand project interventions in priority sectors such as agriculture and agribusiness, (b) provide start-up funds for young graduates who benefitted from the entrepreneurship training and those who will receive similar entrepreneurship training through continued activities, and (c) improve quality of project interventions, including monitoring and evaluation and communications for increased awareness of project activities. In all these proposed activities, the project will promote girls' participation in the proposed activities and will highlight the need for the strong involvement of local communities and actors.</p> <p>http://projects.worldbank.org/P163467?lang=en</p>
World Bank	Investment Climate and Competitiveness Support Project	<p>The development objective of the Investment Climate and Competitiveness Support Project for Niger is to improve critical elements of investment climate for the private sector and enhance competitiveness of small and medium enterprises (SMEs) in selected agriculture value chain. The project comprises of three components. The first component, modernization of the business environment aims to support the implementation of reforms, which can be easy to implement and have a quick impact on the business environment. It consists of following two sub-components: (i) implementing investment climate reforms; and (ii) enabling institutions for private sector development. The second component, increase the competitiveness of selected agricultural value chains will contribute to improve the competitiveness of SMEs along the agricultural value chains in Zinder and Diffa. It consists of following four sub-components: (i) support to the maison de l'entreprise (ME); (ii) provision of financial and non-financial business development services; (iii) infrastructure development; and (iv) community engagement. The third component, project implementation support will be undertaken mainly through the project implementation unit (PIU) of the International Development Association (IDA) - financed</p>

		<p>competitiveness and growth support project through the on-going arrangements. The project ends in March 2019.</p> <p>http://projects.worldbank.org/P148839?lang=en</p>
FAO	Reducing child labour for sustainable agriculture	<p>The objective is to contribute to the emergence of decent rural jobs and the fight against poverty in Niger. The main effects are classified as follows: 1. The prevention of child labor in agriculture is improved 2. The extent of child labour in agriculture is curbed 3. The issue of "child labour in agriculture" is better taken into account in policy and strategy instruments. This project ended in October 2018.</p> <p>http://www.fao.org/niger/programmes-et-projets/nos-projets/fr/</p>
FAO	Joint Programme to Accelerate Economic Empowerment of Rural Women	<p>The overall objective of the joint programme is to improve living conditions and strengthen the rights of rural women in the context of sustainable development by contributing to the strengthening of women's leadership, improving food and nutrition security, and contributing to women's economic empowerment. And increase rural women's incomes to meet their needs. This project runs until December 2018.</p> <p>http://www.fao.org/niger/programmes-et-projets/nos-projets/fr/</p>
German Federal Ministry for Economic Cooperation and Development (BMZ)	Vocational training for start-ups in Niger (ProEMPLOI)	<p>The objective is to improve employment and income opportunities for the local population in the regions of Agadez and Zinder. The project is implementing measures to promote employment and business opportunities. These are supplemented by short-term actions designed to generate immediate income for the population. The project is making efforts to counter the precarious labour market situation as well as to tackle poverty in general. It utilises an integrated approach to employment promotion covering three pillars: labour market supply, demand and placement. Additionally, it seeks to improve the general conditions in the region. The project adopts a multilevel approach that specifically addresses four fields of activity: 1. Strengthening regional structures and their ability to shape employment policies. 2. Implementing employment-promoting cash-for-work measures. Regional dialogue and coordination among private and public stakeholders are being expanded. The project is supporting regional representatives and national ministries in effectively coordinating and implementing employment-relevant measures in accordance with regional development plans. This is also meant to foster decentralisation, which has so far progressed only slowly. The project is also promoting increased involvement by local political stakeholders in central decision-making and planning processes. 3. Improving the range of support measures aimed at promoting start-ups in potential growth sectors. 4. Enhancing access to business services among micro and small enterprises. The</p>

		<p>project's integrated, needs-based approach to improving income and employment opportunities includes identifying local business models, raising awareness, providing training, and offering advisory and coaching services. The project runs until 2020.</p> <p>https://www.giz.de/en/worldwide/57419.html</p>
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10. References

- AGRA (2017). *AGRA Mali Operational Plan*. <https://agra.org/wp-content/uploads/2017/12/agra-mali-final.pdf>
- Africa Progress Panel (2015). *Power, People, Planet: Seizing Africa's energy and climate opportunities*. https://reliefweb.int/sites/reliefweb.int/files/resources/APP_REPORT_2015_FINAL_low1.pdf
- Allen, T., Heinrigs, P., Heo, I. (2018). *Agriculture, food and jobs in West Africa*. West African Papers No.14. OECD. <https://doi.org/10.1787/24142026>
- Allen, T., Heinrigs, P. (2016). *Emerging Opportunities in the West African Food Economy*. West African Papers No. 01. OECD. <http://dx.doi.org/10.1787/5jlvfj4968jb-en>
- Al-Mahboubi, M.A. (2016). *Informal labour – Mauritania*. Arab Watch. <http://www.annd.org/cd/arabwatch2016/pdf/english/14.pdf>
- Antil, A. (2014). *The Mining Boom in the Sahel Region: Will the Development last?* Note de l'Ifri. <https://www.ifri.org/en/publications/enotes/notes-de-lifri/mining-boom-sahel-region-will-development-last>
- Arawomo, D.F., Badejo, A.A. (2015). Extent and drivers of intra-regional trade in food products in ECOWAS. *International journal of trade and global markets*. 8(4), p.310-323. <https://www.inderscienceonline.com/doi/pdf/10.1504/IJTGM.2015.072798>
- Baquedaño, F.G., Sanders, J.H., Vitale, J. (2010). Increasing incomes of Malian cotton farmers: is elimination of US subsidies the only solution? *Agricultural Systems*. 103, p.418–432. <https://pubag.nal.usda.gov/download/46161/PDF>
- Benjaminsen, T.A., Aune, J.B., Sidibé, D.A. (2010). Critical political ecology of cotton and soil fertility in Mali. *Geoforum*. 41, p. 647-656.
- Bhorat, H., Rooney, C., Steenkamp, F. (2016). *Africa's Manufacturing Malaise*. United Nations Development Programme (UNDP) Regional Bureau for Africa Working Paper Series, Vol.1, No. 3. <http://jobsanddevelopmentconference.org/wp-content/uploads/2016/10/STEENKAMPAfricas-Manufacturing-Malaise.pdf>
- Chen, T. (2017). *The impact of the shea nut industry on women's empowerment in Burkina Faso*. A multi-dimensional study focusing on the Central, Central-West and Hauts-Bassins regions. Social Protection and Forestry Working Paper 3. FAO. <http://www.fao.org/3/a-i8062e.pdf>

Christiaensen, L., Lawin, G. (2017). *Jobs within the Structural Transformation — Insights for Côte d'Ivoire*. Published in: Côte d'Ivoire Jobs Diagnostic — Employment, Productivity, and Inclusion for Poverty Reduction. Christiaensen, L. and P. Premand (eds). World Bank.

Christiaensen, L., Premand, P. (2017). *Côte d'Ivoire Jobs Diagnostic — Employment, Productivity, and Inclusion for Poverty Reduction*. World Bank.
<https://openknowledge.worldbank.org/handle/10986/26384>

Daniel, P., Keen, M., Swistak, A., Thuronyi, V. (2016). *International Taxation and the Extractive Industries*. Routledge Studies in Development Economics.

Daniels, A., Gutiérrez, M., Fanjul, G., Guereña, A., Matheson, I., Watkins, K. (2016). *Western Africa's missing fish. The impacts of illegal, unreported and unregulated fishing and under-reporting catches by foreign fleets*. Overseas Development Institute & porCausa.
<https://www.odi.org/sites/odi.org.uk/files/resource-documents/10665.pdf>

Danish Trade Union (2014). *Niger: Labour market profile – 2014*. Ulandssekretariatet. Council for International Development Cooperation.
http://www.ulandssekretariatet.dk/sites/default/files/uploads/public/PDF/LMP/Imp_niger_2014_final_version.pdf

Dembele, B., Bett, H.K., Mutai, M., Le Bars, M. (2017). Dynamics and adaptation of agricultural farming systems in the boost of cotton cropping in southern Mali. *African Journal of Agricultural Research*. 12(18), p.1552-1569. <https://academicjournals.org/journal/AJAR/article-full-text-pdf/AFA161864117>

Dolan, C., Rajak, D. (2016). Remaking Africa's informal economies: Youth, entrepreneurship and the promise of inclusion at the bottom of the pyramid. *Journal of Development Studies*. 52(4). p.514–529. <https://doi.org/10.1080/00220388.2015.1126249>

Dolan, C., Roll, K. (2013). Capital's new frontier: From “unusable” economies to bottom-of-the-pyramid markets in Africa. *African Studies Review*. 56(3), p.123–146.
<https://muse.jhu.edu/article/528522/pdf>

Drummond, P., Thakoor, V., Yu, S. (2014). *Africa Rising: Harnessing the Demographic Dividend*. IMF Working Paper WP/14/143. <https://www.imf.org/external/pubs/ft/wp/2014/wp14143.pdf>

European Parliament (2018). *Research for PECH Committee – Fisheries in Mauritania and the European Union*. Policy Department for Structural and Cohesion Policies Directorate General for Internal Policies of the Union
[http://www.europarl.europa.eu/RegData/etudes/STUD/2018/617458/IPOL_STU\(2018\)617458_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/STUD/2018/617458/IPOL_STU(2018)617458_EN.pdf)

Evoh, C.J. (2017). *Studies on employment and extractive industry-dominated African countries*. Employment Working Paper No. 221. ILO.
https://www.ilo.org/employment/Whatwedo/Publications/working-papers/WCMS_575602/lang--en/index.htm

FAO (2017a). *Mali: Country fact sheet on food and agriculture policy trends*. Food and Agriculture Organisation of the UN. <http://www.fao.org/3/a-i7617e.pdf>

FAO (2017b). *Youth employment in Mali. Country fact sheet*. Food and Agriculture Organisation of the UN. <http://www.fao.org/3/a-i6981e.pdf>

FEWS NET (2017). *Niger Staple Food and Livestock Market Fundamentals*. September 2017. USAID.

https://reliefweb.int/sites/reliefweb.int/files/resources/FEWS%20NET%20Niger%20MFR_final_20170929.pdf

Fressoli, M., Arond, E., Abrol, D., Smith, A., Ely, A., Dias, R. (2014). When grassroots innovation movements encounter mainstream institutions: implications for models of inclusive innovation. *Innovation and Development*. 4(2), p.277–292. <https://steps-centre.org/publication/grassroots-innovation-movements-encounter-mainstream-institutions-implications-models-inclusive-innovation-submitted-version/>

Fofana, M., Abdoulaye, T., Coulibaly, N., Sanogo, D., Langyintuo, A. (2011). *Characterization of Maize Producing Households in the Dry Savanna of Mali*. IER - IITA publication produced as part of the Drought Tolerant Maize for Africa (DTMA) Project Country Report – Household Survey. <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.642.1380&rep=rep1&type=pdf>

Foltz, J.D., Aldana, U.T., Laris, P. (2012). *The Sahel's Silent Maize Revolution: analysing maize productivity in Mali at the farm-level*. NBER Working Paper 17801. <http://www.nber.org/papers/w17801>

Fox, L. (2014). *Meeting the youth employment challenge in Africa – six myths*. World Bank blog <https://blogs.worldbank.org/jobs/meeting-youth-employment-challenge-africa-six-myths>

Fox, L., Haines, C., Huerta Muñoz, J., Thomas, A. (2013). *Africa's Got Work to Do: Employment Prospects in the New Century*. IMF Working Paper WP/13/201. <https://www.imf.org/external/pubs/ft/wp/2013/wp13201.pdf>

Fransen, S., Marchand, K., Vonk, L. (2016). *Remittances, Entrepreneurship and Development*. IS Academy Policy Brief no. 15. <https://www.sciencedirect.com/science/article/pii/S0022199616301143>

Harrison, K., Scott, A., Hogarth, R. (2016). Accelerating access to electricity in Africa with off-grid solar: The impact of solar household solutions. Overseas Development Institute (ODI) report. <https://www.odi.org/sites/odi.org.uk/files/odi-assets/publications-opinion-files/10229.pdf>

Hebous, S., Tran, T.T. (2017). *Trends and Prospects for Formal Job Creation in Côte d'Ivoire*. Published in: Côte d'Ivoire Jobs Diagnostic — Employment, Productivity, and Inclusion for Poverty Reduction. Christiaensen, L. and P. Premand (eds), World Bank.

High Investment Council Niger (2017). *Investment in Niger*. <https://www.nigerrenaissant.org/sites/default/files/2017-12/Brochure%20Niger%20V6%20AN%20leger.pdf>

Human Rights Watch (2011). *World Report 2011*. https://www.hrw.org/sites/default/files/related_material/wr2011_book_complete.pdf

Ickowicz, A., Ancey, V., Corniaux, C., Duteurtre, G., Pocard-Chappuis, R., Touré, I., Vall, E., Wane, A. (2012). *Crop–livestock production systems in the Sahel – increasing resilience for adaptation to climate change and preserving food security*. Chapter in: Building resilience for

adaptation to climate change in agriculture sector. FAO.

<http://www.fao.org/docrep/017/i3084e/i3084e.pdf>

IEA (2013). *Pico Solar PV Systems for Remote Homes. A new generation of small PV systems for lighting and communication*. International Energy Agency, Photovoltaic Power Systems Programme. http://www.iea-pvps.org/fileadmin/dam/public/report/technical/rep9_12_PVPS_Pico_Solar_PV_Systems_apr13.pdf

IFPRI (2017). *Global Food Policy Report 2017*. Washington.

<http://ebrary.ifpri.org/utils/getfile/collection/p15738coll2/id/131085/filename/131296.pdf>

ILO (2016). *Child Labour in Cotton – a briefing*. International Labour Office.

<http://www.ilo.org/ipecinfo/product/download.do?type=document&id=29655>

IMF (2018a). *Mali: Selected Issues*. Country Report No. 18/142. International Monetary Fund.

<https://www.imf.org/en/Publications/CR/Issues/2018/05/31/Mali-Selected-Issues-45922>

IMF (2018b). *Burkina Faso: Economic Development Report*. Country Report No. 18/85.

International Monetary Fund. <https://www.imf.org/en/Publications/CR/Issues/2018/03/23/Burkina-Faso-Economic-Development-Documents-45751>

IMF (2018c). *Chad: first review under the extended credit facility arrangement, and request for a waiver of nonobservance of performance criteria*. Country Report No. 18/108.

<https://www.imf.org/en/Publications/CR/Issues/2018/04/27/Chad-First-Review-Under-the-Extended-Credit-Facility-Arrangement-and-Request-for-a-Waiver-of-45817>

IMF (2017). *Islamic Republic of Mauritania: Staff Report*.

<https://www.imf.org/external/pubs/ft/dsa/pdf/2017/dsacr17324.pdf>

IMF (2016). *Chad: Selected Issues*. IMF Country Report No. 16/275.

<https://www.imf.org/en/Publications/CR/Issues/2016/12/31/Chad-Selected-Issues-44191>

IMF (2016). *Burkina Faso: Selected Issues*. IMF Country Report No. 16/391.

<https://www.imf.org/external/pubs/ft/scr/2016/cr16391.pdf>

IMF (2015). *Mali: Selected Issues*. Country Report No. 15/340. International Monetary Fund.

<https://www.imf.org/external/pubs/ft/scr/2015/cr15340.pdf>

Inter Reseaux (2017). *Pastoral Livestock Farming in Sahel and West Africa. 5 Preconception put to the test*. Inter Reseaux Developpement Rural. <http://inter-reseaux.org/IMG/pdf/int-17-broch-pastoralismeuk-bd.pdf>

IRENA (2016). *Solar PV in Africa: Costs and Markets*. International Renewable Energy Agency.

http://www.irena.org/-/media/Files/IRENA/Agency/Publication/2016/IRENA_Solar_PV_Costs_Africa_2016.pdf

Kabedi-Mbuyi, M., Astou Diouf, M., Lonkeng Ngouana, C. (2016). *Walking a Fine Line: Public Investment Scaling Up and Debt Sustainability in Burkina Faso*. IMF African Department.

<https://www.imf.org/external/pubs/ft/dp/2016/afr1603.pdf>

Koroma, S., Nimarkoh, J., You, N., Ogalo, V., Owino, B. (2017). *Formalization of informal trade in Africa Trends, experiences and socio-economic impacts*. FAO & CUTS International.
<http://www.fao.org/3/a-i7101e.pdf>

Koulibali, C., Sanders, J., Prekel, P., Baker, T. (2011). *Cotton price policy and new cereal technology in the Malian Cotton Zone*. Selected Paper prepared for presentation at the American Agricultural Economics Association Annual Meeting, Pittsburgh, Pennsylvania.
<https://ageconsearch.umn.edu/bitstream/103755/1/AAEAselectedpaper05032011.prnA.pdf>

Kuepie, M., Tenikue, M., Walther, O.J. (2014). *Small businesses performance in West African border regions: do social networks pay off?* LISER Working Paper Series.
https://www.liser.lu/publi_viewer.cfm?tmp=2517

Lange, P., Dietz, T., Rau, M.L. (2016). *Improving the perspective for regional trade and investment in West Africa: the key to food security, economic development and stability in the region*. Scoping Report. Food & Business Knowledge Platform. <https://ecdpm.org/wp-content/uploads/Improving-Perspective-Regional-Trade-Investment-West-Africa-July-2016.pdf>

Laris, P., Foltz, J.D., Voorhees, B. (2015). Taking from cotton to grow maize: The shifting practices of small-holder farmers in the cotton belt of Mali. *Agricultural Systems*. 133, p.1–13.
<https://doi.org/10.1016/j.agsy.2014.10.010>

Ly, C., Fall, A., Okike, I. (2010). *West Africa. The livestock sector in need of regional strategies*. Published in: *Livestock in a changing landscape*. Vol. 2. Experience and regional perspectives. P. Gerber, H. Mooney & J. Dijkman (eds).

Meagher, K. (2018). Cannibalizing the Informal Economy: Frugal Innovation and Economic Inclusion in Africa. *The European Journal of Development Research*. 30(1), p.17-33.
<https://doi.org/10.1057/s41287-017-0113-4>

Martin, A., Helbig de Balzac, H. (2017). *The West African El Dorado: Mapping the Illicit Trade of Gold in Côte d'Ivoire, Mali and Burkina Faso*. Partnership Africa Canada (PAC).
<https://impacttransform.org/wp-content/uploads/2017/09/2016-Jan-The-West-African-El-Dorado-Mapping-the-illicit-trade-of-gold-in-Cote-DIvoire-Mali-and-Burkina-Faso.pdf>

Nordman, C.J., Robilliard, A.S., Roubaud, F. (2011). Gender and Ethnic Earnings Gaps in Seven West African Cities. *Labour Economics*. 18(1), p.132-145.
<https://doi.org/10.1016/j.labeco.2011.09.003>

Omoruyi, E.M.M., Olamide, K.S., Gomolemo, G., Donath, O.A. (2017). Entrepreneurship and Economic Growth: Does Entrepreneurship Bolster Economic Expansion in Africa? *Journal of Socialomics*. 6(4), p.219. <https://www.omicsonline.org/open-access/entrepreneurship-and-economic-growth-does-entrepreneurship-bolster-economic-expansion-in-africa-2167-0358-1000219-95120.html>

Otoo, M., Ibro, G., Fulton, J., Lowenberg-Deboer, J. (2012). Micro-Entrepreneurship in Niger: Factors Affecting the Success of Women Street Food Vendors. *Journal of African Business*. 13(1), p. 6-28. <https://www.tandfonline.com/doi/abs/10.1080/15228916.2012.657937>

Peša, I (2018). The Developmental Potential of Frugal Innovation among Mobile Money Agents in Kitwe, Zambia. *The European Journal of Development Research*. 30(1), p.49–65.
<https://doi.org/10.1057/s41287-017-0114-3>

Pouliot, M. (2012). Contribution of “Women’s Gold” to West African livelihoods: The case of Shea (*Vitellaria paradoxa*) in Burkina Faso. *Economic Botany*, 66(3), p.237–248.

Rodrik, D. (2016). Premature deindustrialization. *Journal of Economic Growth*. 21(1), p.1-33.
<http://www.nber.org/papers/w20935>

Roquefeuil, Q. de, Plunkett, D., Ofei, F. (2014). *The impact of closer regional economic integration on food security in West Africa Focus on the ECOWAS Common External Tariff*. ECDPM Discussion Paper 154. www.ecdpm.org/dp154

Rousseau, K., Gautier, D., Wardell, D. (2015). Coping with the Upheavals of Globalization in the Shea Value Chain: The Maintenance and Relevance of Upstream Shea Nut Supply Chain Organization in Western Burkina Faso. *World Development*. 66, p.413–427. https://ac.els-cdn.com/S0305750X14002691/1-s2.0-S0305750X14002691-main.pdf?_tid=bfa1c369-2416-43c1-aa79-f00b51571816&acdnat=1539266493_144c0783845b091966b100f970bf4705

Sangare, S., Maisonnave, H. (2018). Mining and petroleum boom and public spending policies in Niger: a dynamic computable general equilibrium analysis. *Environment and Development Economics*. 23(5), p.580-590. <https://doi.org/10.1017/S1355770X18000104>

Sanoh, A; Coulibaly, M. (2015). *Socioeconomic and Fiscal Impact of Large-Scale Gold Mining in Mali*. Policy Research Working Paper No.7467. World Bank. <http://hdl.handle.net/10986/22891>

Staatz, J., Hollinger, F. (2016). *West African Food Systems and Changing Consumer Demands*. West African Papers No. 04. OECD. <http://dx.doi.org/10.1787/b165522b-en>

Tacoli, C., Agergaard, J. (2017). *Urbanisation, rural transformations and food systems: the role of small towns*. IIED.

Tefft J. (2010). *Mali's white revolution: smallholder cotton*. Published in: Successes in African Agriculture: Lessons for the Future. Haggblade S. & Hazell P.B.R. (Eds.). p. 1960-2007.

Tschirley, D., Kondo, M., Snyder, J. (2016). *Downstream Report*. Chapter 3 in: Agri-food Youth Employment and Engagement Study (AGYEES). Allen, A., J. Howard, A. Jamison, T. Jayne, M. Kondo, J. Snyder, D. Tschirley and F. K. Yeboah (eds). Michigan State University.
https://www.isp.msu.edu/files/4814/7249/7008/AgYees_Report_FINAL_web.pdf

UNCTAD (2018). *World Investment Report 2018. Investment and New Industrial Policy*. United Nations Conference on Trade and Development.
https://unctad.org/en/PublicationsLibrary/wir2018_en.pdf

UNDP (2008). *Creating Value for All: Strategies for Doing Business with the Poor*. UNDP.
<http://www.rw.undp.org/content/rwanda/en/home/library/poverty/creating-value-for-all---strategies-for-doing-business-with-the-.html>

UNEP (2014). *Light and Livelihood: A Bright Outlook for Employment in the Transition from Fuel-Based Lighting to Electrical Alternatives*. United Nations Environment Programme.
http://www.ecreee.org/sites/default/files/light_and_livelihood_-_a_bright_outlook_for_employment.pdf

Comblon, V., Robilliard, A.S., Roubaud, F. (2017). *Gender Analysis of Labour Market Outcomes in Sub-Saharan Africa: Recent Evidence from Cameroon and Mali*. Discussion Paper UN

WOMEN. <http://awdflibrary.org/bitstream/handle/123456789/531/Gender-analysis-of-labour-market-outcomes-in-sub-Saharan-Africa-en.pdf?sequence=1&isAllowed=y>

USDA GAIN (2018). *2018 West Africa Cotton and Products Annual*. USDA Foreign Agricultural Service. Global Agricultural Information Network. https://gain.fas.usda.gov/Recent%20GAIN%20Publications/Cotton%20and%20Products%20Annual_Dakar_Senegal_4-3-2018.pdf

USAID (2017a). *Climate Change Risk Profile: West Africa Sahel*. Regional Factsheet. https://www.climatelinks.org/sites/default/files/asset/document/2017%20April_USAID%20ATLAS_Climate%20Change%20Risk%20Profile%20-%20Sahel.pdf

USAID (2017b). *Sahel Youth Analysis. Building resilience to shocks and stresses and promoting alternatives to violent extremism in Burkina Faso and Niger*. https://www.usaid.gov/sites/default/files/documents/1860/USAID_Sahel_Youth_Analysis_2017_Final1.pdf

Usher, A., Newitt, K., Merouchi, L. (2013). *Better Cotton and Decent Work: Activities, impacts and lessons learned*. Ergon. <https://bettercotton.org/wp-content/uploads/2014/01/Ergon-report-for-IDH-and-BCI-Exec-sum-final-Oct-2013.pdf>

Vella, H. (2017). *Mining in Mali: balancing prospects and problems*. Mining Technology. <https://www.mining-technology.com/features/featuremining-in-mali-balancing-prospects-and-problems-5852488/>

Vitale, J. (2018). *Economic Importance of Cotton in Burkina Faso*. Food and Agriculture Organisation of the UN. <http://www.fao.org/3/I8330EN/i8330en.pdf>

Walther, O.J., Howard, A.M., Retailié, D. (2015). West African spatial patterns of economic activities: combining the 'spatial factor' and 'mobile space' approaches. *African studies*. 74(3), p.346-365. <https://doi.org/10.1080/00020184.2015.1041286>

Walther, O.J. (2014). *Business, Brokers and Borders: The Structure of West African Trade Networks*. Department of Border Region Studies Working Paper 1/14. <https://ssrn.com/abstract=2593026> or <http://dx.doi.org/10.2139/ssrn.2593026>

World Bank (2018). *Rapport sur la Situation Économique en Mauritanie. Vers une consolidation budgétaire qui améliore la gestion des investissements publics et fortifie les filets sociaux*. <http://documents.worldbank.org/curated/en/471691519149985543/Rapport-sur-la-situation-economique-en-Mauritanie-F%C3%A9vrier-2018>

World Bank (2017). *Republic of Niger: Priorities for ending poverty and boosting shared prosperity. Systemic Country Diagnostic*. <http://documents.worldbank.org/curated/en/998751512408491271/pdf/NIGER-SCD-12012017.pdf>

World Bank (2015a): *Connecting Food Staples and Input Markets in West Africa - a Regional Trade Agenda for ECOWAS Countries*. <http://documents.worldbank.org/curated/en/998751512408491271/pdf/NIGER-SCD-12012017.pdf>

World Bank (2015b). *Country Partnership Framework for the Republic of Chad*.
<https://openknowledge.worldbank.org/bitstream/handle/10986/23664/Chad000Country0r0the0period0FY16020.pdf?sequence=1&isAllowed=y>

Yusuff, O.S. (2015). *Gender Dimensions of Informal Cross-border Trade in the West African Sub-region (ECOWAS) borders*. Published in: *Regional economic communities: exploring the process of socio-economic integration in Africa*. A.O. Olutayo & A.I. Adeniran (eds). CODESRIA.

Zabsonré, A., Agbo, M., Somé, J., Haffin, I. (2016). *Gold exploitation and income disparities: the Case of Burkina Faso*. https://editorialexpress.com/cgi-bin/conference/download.cgi?db_name=CSAE2016&paper_id=629

ZEF, FARA, IER (2017). *Country Dossier: Innovation for Sustainable Agricultural Growth in Mali*. Programme of Accompanying Research for Agricultural Innovation.
<https://research4agrinnovation.org/wp-content/uploads/2017/10/MaliDossier2017.pdf>

Suggested citation

Quak, E. (2018). *Drivers, Challenges and Opportunities for Job Creation in the Sahel*. K4D Helpdesk Report 455. Brighton, UK: Institute of Development Studies.

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